

## Theorising for Innovation: Implications for English Language Teacher Education

Ania Lian

[ania.lian@cdu.edu.au](mailto:ania.lian@cdu.edu.au)

Charles Darwin University, Darwin, Australia

Widya Hanum Sari Pertiwi

[hanoems@gmail.com](mailto:hanoems@gmail.com)

Charles Darwin University, Darwin, Australia

### ABSTRACT

The paper begins by acknowledging the complexity of the challenges that the introduction of the new international curriculum standards has brought with it. It also acknowledges the role that these policies have played in opening a space for pedagogic research and innovation in teaching programs. The paper argues that while policies are necessary to support change, transformation of practice is an evolutionary process, necessitating critical engagement with the vision that informs new policies, often requiring academics to confront the discourses which support their current practices and analyse the tensions that this process of confrontation may reveal. In relation to English language teacher education, one tension that this study brought into focus is the problem of research innovation. The issue is important since there is research to indicate that stagnation begins early, as a consequence of research training and examination practices. The paper develops a strategy for addressing the problem of research innovation, especially at the level of undergraduate education, and argues that fostering innovation can be as easy as enabling students to explore problems, rather than looking for textbook-based solutions that encourage intellectual compliance.

**Keywords:** research methodology; CALL research; innovation in CALL; literature review; language teacher education

### INTRODUCTION

Universities around the world increasingly engage in redefining their role as leaders of change, innovation and education. Critical aspects of this process of “renewal” involve, *inter alia*, the issue of accountability of the teaching programs and the provision of quality learning experiences for their students.

In Australia, the new accountability processes are being put in place to ensure that universities provide comparable learning experiences across the sector, both nationally and internationally, and are capable of “[c]ompet[ing] effectively in the new globalised economy” (Bradley, Noonan, Nugent, & Scales, 2008, p. 1). Furthermore, shared sets of learning outcomes underpin newly developed university courses. Typically, they draw on qualities and abilities that support higher order thinking skills such as: critical thinking, professional expertise, intellectual curiosity, problem-solving, independent thought, creativity, ethical practice, integrity, communication, teamwork, self-management, planning and organising, technology skills, life-long learning, initiative and enterprise. A shared set of outcomes offers a framework for universities to contextualise the contributions of their programs and initiatives within the broader economic, social, and cultural well-being of international communities.

In the ASEAN member countries, the shift toward competency-based education reflects these global tendencies and marks a policy transition away from the industrial and

agricultural era toward modes of production that thrive on mobility, innovative thinking, research and development (Kell & Vogl, 2012). The ASEAN Socio-Cultural Community Blueprint (The ASEAN Secretariat, 2009), a document which articulates policies for social and cultural development for the ASEAN member countries, follows the global trends, which identify promoting and investing in education as a priority and place emphasis on life-long learning, strengthening human development and research, capacity building, innovation, and entrepreneurship (The ASEAN Secretariat, 2009, p. 2). In terms of education, the Blueprint identifies 21<sup>st</sup> century learning and higher-level thinking skills (P21, 2007) as foundational for all national policies and curricula. As in Australia, these include creativity and innovation, critical thinking and problem solving, communication, and collaboration. These policies are also echoed by the Asia Society and the U.S. Council of Chief State School Officers (2011), who see global standards as a necessary quality of modern education which they define as “the capacity and disposition to understand and act on issues of global significance” (p. xiii). For example, in an attempt to respond to these international trends, the Indonesian government developed new quality standards for higher education, the Indonesian Qualifications Framework (IQF) (Government of Indonesia, 2012). The NSHE (MORTHE, 2015) specify that the final year of undergraduate programs (Year 4) be devoted entirely to the development of research skills, with a thesis or a final project report being completed and uploaded on the university website (MORTHE, 2015, p. 64). It is well-understood that supporting the implementation of these policies will provide the basis for future growth and development (Feuer & Hornidge, 2015). However, the emphasis of higher order thinking and research skills in undergraduate programs presents many challenges to higher education institutions worldwide, not only those in Asia. These challenges are a natural by-product of any policy change. As Rawolle and Lingard (2015, p. 17) explain, policy development and policy implementation do not follow from one another in a seamless and straightforward way. Policy development results in a text which then needs to be re-interpreted and appropriated to the conditions of specific practice.

Academic teachers, who themselves are recipients of policies, are likely re-interpret policy texts in accordance with the logics and experiences which they understand to be specific to their context of practice (Rawolle & Lingard, p. 19, 21). This may not be enough to adopt the directions expressed in new policy documents. According to Rawolle and Lingard (2015, p. 20), while policies are necessary to support change, transformation of practice can take place only when the tensions between the *status quo* and the new directions are both identified and addressed. In other words, in and of themselves, policy texts have no meaning unless they are related to the specific needs of the contexts where they are to be applied to make an important difference. This process of translation turns policy texts, which imply universal, undifferentiated application across all sites of policy practice and implementation, into a meaningful tool for approaching teaching contexts which are highly differentiated spaces, located within diverse fields of practice that are shaped by stakeholders with varied interests and histories (Rawolle & Lingard, 2015, p. 21). As pointed out by Ball, Maguire, Braun and Hoskins (2011, p. 625), these combinations of stakeholders and institutional histories cannot be ignored when planning policy implementation and practice improvements.

It follows that change of practice requires both reflection on and re-evaluation of practice, its context and the factors that shape the stakeholders’ understanding of the aspects that need changing. Furthermore, new policies are likely to call for directions that may need to challenge deeply entrenched beliefs that form the core of disciplinary practices. These beliefs impact on the established institutional cultures, research, and the expectations which shape academics’ engagement in their respective fields. The danger is that digging deeply into the causes of stagnation addressed by policy change may open a gap that needs to be

filled with understandings and models of practice that have not yet been articulated, developed or even understood. This is the real challenge of change: in the absence of ready-made solutions the direction from which the desired innovation is to come is not obvious. It is therefore important to acknowledge that change does not only take time, it also takes courage to examine, question and acknowledge both the known and the unknown “unknowns”, i.e. a process that may give rise to difficult questions that need to be asked if genuine progress is to take place.

In the context of teacher education, some of these difficult questions were raised by Professor Gary Thomas (2007; Thomas & Pring, 2004) in relation to research, research methods and their relation to practice. Throughout his life’s work, Thomas draws attention to the stifling effect that research methods in education have had on innovation due to the field’s preoccupation with theory construction. Thomas’ critique is important due to his extensive contribution to the field as the Executive Editor of *Educational Review*, the co-editor of the *International Journal of Research and Method in Education*, and the *British Educational Research Journal*, all high-ranking journals of education.

The present paper builds on this critique and that of others who raise similar concerns. If, to follow Thomas (2007), the construction of theory should not be the key concern of educators, what are the alternatives? In other words, what should the researchers study to provide educators with sound advice (and evidence) on practice? In order to propose a way out of this impasse, the authors of this paper will develop a framework that may be of use to English language teacher education (ELTE) researchers when designing or evaluating research or to academics who teach research design. The framework identifies a number of questions that need consideration when designing an innovative inquiry. To illustrate the workings of this model, the authors will apply it to two studies. Each study is in the area of Computer-Assisted Language-Learning (CALL) and each illustrates a different approach to research design. Next, the authors will summarise the implications of their model for research that seeks to support innovation and new policy directions.

As discussed earlier, when reading this paper, it is important to keep in mind that policy implementation is not a matter of application of the new objectives. It is also not a matter of filtering out the good research from the bad one. The process takes time, requires research and reflection that will result in new ideas, new ways of doing things and, inevitably, new problems. The critique and the proposal developed in this paper are part of this evolutionary process, not the solution. Our aim is to engage researchers in a reflective process about systems and beliefs that may help progress the internationalisation policies of universities in ASEAN member countries with respect to ELTE. Growing international competition and an increasingly global graduate employment market have opened up a space for pedagogic research and innovation in teaching programs. This paper seeks to engage this space.

## **THE ROLE OF THEORY IN ELTE RESEARCH**

The central point of Thomas’ critique of the research culture in education is that for research to result in innovation, it needs to begin with innovation. Innovation does not simply emerge from the worn-out paths and thinking; researchers must be proactive in developing research designs that bring fresh perspectives into consideration and develop new research methods, rather than following the past. In other words, rather than stick to solutions identified in the numerous research methods textbooks, Thomas (2007, p. 92) argues for researchers to take risks and build on new knowledge and findings to build new, unexpected connections that lead to new ways of thinking about problems. To this end, he (Thomas, 2004, p. 3) encourages “playing with almost any piece of seemingly relevant information” and “drawing

eclectically from many and varied streams of information: a bricolage of potential evidence”. However, Thomas argues, this is not what education research does.

According to Thomas (Thomas 2007, p. 30), education research is much more concerned with “theory development” than with building potentially risky connections. In his view, theory tends to be used as a shell to give value to arguments and observations that otherwise might be perceived as mundane or trivial (p. 143), a practice which, he argues, is further reinforced through research training and research examination practices, that tend to operate as a *regulatory body*, ensuring that “dissent is increasingly rare” and that it is based on *evidence* “supported by 100 references”, thus resting “squarely in the middle lane of orthodoxy” (p. viii). It follows that the way in which educators are trained as researchers compounds the problem. The tendency is, Thomas (2007, p. 90) explains, for education research to treat theory “as if it is to be cherished, not falsified: far from being the intellectual construction to be relentlessly assailed, it is the proud fortress for one’s thinking” (Thomas, 2007, p. 146). In his view, this reliance on theory development does not serve education well. Thomas (2007, p. 92) describes the research culture in education as introverted, unadventurous and obsessed with “what-is” and “what has-been”, thus “collectively excluding the raw light of new ideas”.

The second point follows from these arguments: education research needs to establish the purpose that informs its studies (Thomas 2007, p. 30). For example, is it to inform the practice of teaching or is it to support students in the context of their learning? A response to these questions, or indeed any other considerations, is not a matter of choice, but a matter of evidence that a study needs to compile to locate itself critically in educational problematic, i.e. by evaluating the relevance, sufficiency and veracity conditions of this evidence (Thomas & Pring, 2004, p. 4). However, once again, Thomas (2007) argues, this is not what education research does. When speaking on the innovation-hampering effects of this preoccupation with “theory development”, Thomas (2007) shows that education research has come full circle without even noticing it, from an apprenticeship model of the 19<sup>th</sup> century, back again to the apprenticeship model. In other words, not much has changed over the last one hundred years. In a somewhat sarcastic manner, following Carr (cited in Thomas, 2007, pp. 4-5), Thomas traces the beginnings of educational theory to the 19<sup>th</sup> century where, as he puts it, in the spirit of post-Enlightenment, English reformers agreed to rationalise educational practice, which back then followed a pupil-teacher method of apprenticeship, “a process to which we have now ironically returned”.

Concurring with Popper (cited in Thomas, 2007, p. 95) Thomas advocates for creativity in research, a goal that can be attained only by “the almost deliberate casting-off of existing knowledge”. In this regard, Thomas (2007, p. 83) refers to Pierre Bourdieu (cited in Thomas, p. 83) illustrating his own process of identifying and working with data. Bourdieu (cited in Thomas, p. 83) distinguishes between research that works with pre-constructed concepts, in order to create a theory, and research that theorises a process for identifying facts and phenomena. When research that works with pre-constructed concepts, a theory ceases to proceed by doubting its own premises, the inquiry stops. The conceptual boundaries stabilise, there is no change and, hence, no true expansion of ideas. On the other hand, when a researcher uses theories to develop “thinking tools”, the process involves the creation of rich articulations between conflicting (seemingly incommensurable) representations enabling the researcher to examine issues in a new way, from a perspective that is grounded in the conceptual limitations of the construction process.

However, these thinking tools do not come ready with the discipline. They need to be created (Thomas, 2007, p. 90). When this process of innovation stops, as Thomas (2007, p. 90) explains, i.e. when thinking tools become a theory that now delineates all that is known, the discipline becomes stifled and unable to generate new insights. It can only continue work

with what it knows already. This stifling process, as Thomas (2007, p. viii) argues, has its roots in a practice whereby ideas that initially may have been ground-breaking acquire the status of a canon and now must be taught and applied judiciously. In the absence of “play” or dialogue, any alternative views are ignored, including the proposals developed in other disciplines that may have relevance to education, “Dismissed is perhaps too positive a word” (Thomas, 2007 p. 30). However, when spotted, these proposals are given only superficial interest, “While educators have occasionally bounced up against these currents of thought and considered them cursorily, they appear to have dismissed their potential (Thomas, 2007, p. 30). Thomas links his arguments to Grayling’s (cited in Thomas, 2007, p. viii) critique of contemporary academic life that Grayling shows to have become industrialised, with an increasing tendency to result in work that is “scholarly and uninspired, ambitious and timid, scrupulous and dim-sighted”.

The views of Thomas (2007) are backed up by other scholars. Hammersley (2004, p. 138) draws educators’ attention to the accountability concerns that the goal of building a theory present. He explains that a theory constructs the object of its concern and, in so doing, it ignores the variables, and the relationships between them, that are outside its scope. He then adds that the idea of organising the variables that are believed to matter in a set of causally developed rules misses the point that education is a context of dynamic variables where value judgments are not reducible to numbers that claim neutrality and the ability to *tell it as it is*, “not without missing a great deal that is important” (Hammersley, p. 137). Hence, in his view, the idea that a theory could provide “specific and highly reliable answers to questions about what ‘works’” (Hammersley, p. 137) encounters accountability issues which concern the assumption that research and practice are transparent practices that can be documented in an objective fashion (Hammersley, p. 144). In other words, the very belief that research should result in accountable educational practices is based on false expectations of transparency and an uncritical approach to findings (Hammersley, p. 146). According to Carr (2006, p. 137), this goal of extracting ‘what matters’ from a variety of constraints that apply in a dynamic context of learning for the sake of having a theory is an attempt to develop a perspective from “without”, i.e. a position that stands “outside our educational practices” while also claiming to know them, “educational theory is nothing other than the name we give to the various futile attempts that have been made over the last hundred years to stand outside our educational practices in order to explain and justify them”.

In summary, this section attempted to show that the general arguments of scholars who have argued against the development of an “educational theory” centres on the accountability and the innovation-hampering aspects of this goal. Their argument in favour of the development of “thinking tools” to elicit critical insights on one’s practice will be taken up in the later sections of this paper. Next, the authors turn to other scholars for perspectives on how to construct critical and innovative studies.

## **FRAMEWORK FOR DESIGNING AND EVALUATING EDUCATION RESEARCH**

Biesta, Allan and Edwards (2014, p. 198) identify three types of perspectives for consideration when designing or evaluating current research in education: critical, political and generative. The critical perspective asks questions about the method by which research creates bridges with the “world”, i.e. with the interests that impact on the lives of the broader community of which a specific research problem is a part. The goal of the critical perspective is to counteract the universalising tendencies of educational theories by amplifying the role of research studies as “interventions in the world rather than simply being about it” (Biesta et al., 2014, p. 199). In their view, the use of theory as a tool may help alleviate the problems identified by Tröhler (cited in Biesta et al., 2014), where education is seen as distinct from

any other practice and where the practice of teaching and learning is treated as if it were free from the multiplicity of constraints that impact on, shape and generate human action, with “the child as the site for both practice and theory at the expense of wider concerns with the education of the person as part of ongoing life practices” (Biesta et al., 2014, p. 199). Biesta et al. (2014, p. 199) warn against the totalising tendencies of concepts such as “effective teacher”, “empirical fact”, focusing on ‘relatively trivial technical questions’ and turning students into “eunuchs of analysis”.

The political perspective raises questions pertinent to the relationship between the intentions of different theories and the political agenda for which they may be used (Biesta et al., 2014, p. 198). Educational theory can be hijacked to support a particular political and social order uncritically (Biesta et al., p. 202). As pointed out by Szkudlarek (2014), educational theory must make its political ties visible by specifying its own role in the political and social views that it supports. Sidorkin (cited in Biesta et al., 2014, p. 202) argues that researchers must understand the limits of their own findings and theories, “When the agency is ignorant of [these] limits, we start destroying something in order to improve it”. Unfortunately, Szkudlarek argues, educational theories that catch on and flourish are those that normalise and are written using persuasive tone, “saturated with terms of obligation, and filled with postulates and condemnations” (Biesta et al., 2014, p. 202).

The generative perspective concerns itself with “the new forms of practice” that “new forms of theorizing” can make possible (Biesta et al., 2014, p. 198). While Sidorkin (cited in Biesta et al., 2014, p. 204) is pessimistic about the current system of schooling, Biesta et al (2014, p. 204) reaffirm their commitment to approaching teaching and learning “as practices within the world”. They draw on Popkewitz (cited in Biesta et al., 2014, p. 204), Tröhler (cited in Biesta et al., 2014, p. 204) and Usher and Anderson (cited in Biesta et al., 2014, p. 204), and argue for research and forms of practice that dismantle existing regimes of thought. They (Biesta et al., 2014, p. 204) see the need for “providing a strategy to ‘unthink’ the common sense of schooling, to denaturalize what is taken-for-granted, and to make fragile the causalities of the present”.

Together, the perspectives developed by Biesta et al. (2014) and the critique by Thomas (2004, 2007) and other scholars of the preoccupation of education research with theory development are being proposed in this paper as a framework for designing education research that (a) designs its own innovative research methods to result in innovative outcomes, and (b) resists its own universalising tendencies by contextualising its own interest and not conflating it with the interests that guide students’ learning, evaluating its objectives against the broader political context, and resulting in new forms of practice that emerge from new ways of framing and investigating problems.

The next section examines two examples of research studies in CALL with the help of the objectives specified in this framework. The aim of the analysis is to investigate the capacity of the framework to assist with a critical review of research studies. For this purpose, the authors selected two research reports that showed to engage contrasting approaches to the concept of innovation and its relevance to students’ learning. In the study by Rodliyah (2016), it is argued, the researcher attributes innovation value to an online communication platform, and its relevance to students’ learning is described in terms that are not clearly linked to the concept of success. Arbitrary concepts are given positive value, with no framework being offered to validate this assessment. On the other hand, the study by Lian, Bodnarchuk, Lian and Napiza (2017), develops a tool for students to evaluate aesthetic qualities of their academic writing by engaging different sensory modalities, i.e. rhythm, intonation curve, intonation chunks, and text. Innovation is conceived as an approach, or a tool, designed to support a systematic analysis of writing. With the help of the process constructed for this purpose Lian et al. (2017) enable students to perceive different aesthetic

arrangements in their own writing in relation to expert authors of academic or, indeed, any other texts. No arbitrary values are established as markers of success. Instead, students are given a tool to play with the different patterns that they discover and to assess the different impact that they can elicit with those patterns in relation to their own aesthetic goals. It is innovation the authors attribute to these exploratory capacities, with the tool serving to develop students' own critical and creative thinking about writing, not to teach writing. Hence, the tool is a learning support, not a teaching device.

### EVALUATING RESEARCH IN ELTE

Drawing on the objectives of the framework outlined above the analysis that follows examines examples of CALL research studies in relation to the following questions.

- a) The object of study: What new perspectives were engaged to describe the object of study?
- b) The method of study: What new understandings were identified to devise the method of investigation?
- c) The beneficiaries of the study: Who was the beneficiary of the study? What new understandings of the research participants' contexts were engaged and how were they impacted by the study?
- d) The critical perspective: How was the world integrated into the study?
- e) The political perspective: How were the policies integrated into the study?
- f) The generative perspective: What new forms of practice emerged as a result of the new ways of theorising?

The study by Rodliyah (2016) serves as the first example to be examined. The examination follows the questions above.

- a) The object of study: What new perspectives were engaged to describe the object of study?  
The study (Rodliyah, 2016) emerged from the understanding that the Facebook platform could provide students with opportunities to encounter and use formal and informal language to express different language functions. The study sought to examine the language that the students used on a classroom Facebook page and identify strategies that students believed helped them express themselves (p. 86). Students were invited to reflect on their use of constructs such as vocabulary (p. 90), grammar, spelling and fun (p. 91). Other concepts included learning about the world, building rapport, expressing feelings or learning from other students' writing (p. 91-92). However, the study did not offer new perspectives to investigate students' use of those forms in a new way. In other words, while students' own feelings are important, without a reference to a specific process that would allow the researcher to take a perspective on, or identify patterns in, students' descriptions, the findings offer limited value to the community seeking to understand, in a systematic way, the relationship between the use of a classroom Facebook page and language learning.
- b) The method of study: What new understandings were identified to devise and justify the method of investigation?  
The researcher (Rodliyah, 2016) did not specify why the method of data collection and data analysis, that were being used, were relevant. The researcher did acknowledge previous studies that praised Facebook for a number of features, such as immediacy of contact with teachers or the opportunity to learn to use social media (p.

83). Other features included interactivity, periodicity and privacy (p. 84). However, in terms of the data collection process, none of these concepts was approached theoretically and the data analysis process was not derived from any concepts and processes that would illustrate their relevance to the learning students or the learning process itself. The references to previous studies that used Facebook did not refer to any specific process or principles that the analysis identified as seeking to illuminate or further inform. This uncritical approach to her own categories of analysis also prevented the researcher to critically address the reasons for which the students showed a very low level of engagement on the classroom Facebook page, which then resulted in limited data (p. 86).

- c) The beneficiaries of the study: Who was the beneficiary of the study? What new understandings of the research participants' contexts were engaged and how were they impacted by the study?

The findings of the study (Rodliyah, 2016) did not describe the participants' contexts, nor did they show how the study sought to enhance students' experiences in those contexts. In the discussion section, the researcher constructs links between her own findings and other studies. For example, the study claims to confirm that "[Facebook] students produce more language functions than those who use paper and pen in dialogue journaling" (p. 92). However, while the researcher may be right, in the absence of a link between the participants' own contexts and the learning environment of the Facebook as designed by the study, it is difficult to ascertain whether the findings show that real learning took place, or that they simply show that something happened. There is a difference between the two conditions. All studies tend to produce some kind of results, but the ability of these results to inform future studies needs to be shown in a way that can capture progress, i.e. a shift between what was and what happened as a result of an intervention. Furthermore, if the study is to benefit the students, this shift needs to be captured on students' terms, or, at least, in relation to what is known about the students.

- d) The critical perspective: How was the world integrated into the study?

The researcher (Rodliyah, 2016) did not relate the concepts of reading and writing to any theoretical construct that would locate these practices within a community, with goals and the manner of their engagement that are regulated by intentions that stem from students' personal lives and experiences. In other words, nobody just reads or writes; we do so because we feel the need to address the contexts that affect us and we do so to impact on those contexts. In the absence of a theoretical framing of the concepts of reading and writing, it is difficult to see why the format of the study was expected to make a positive difference to students' lived experiences and, thereby, to their learning. This lack of theoretical framing resulted also in selective conclusions. For example, the limitations that the study identified refer more to the traditional concerns with the population size, the length of the study, or students' personal attitudes (pp. 95-96). The study pays little attention to its own conceptual limitations and assumptions that impacted on its findings. However, the researcher does report issues with students' engagement in the project and the purpose of the Facebook page, "Some were confused about what to write" (p. 95). Arguably, had the study linked its environment with students' lived experiences, it is not likely that this confusion would have happened (Lian, 2008).

- e) The political perspective: How were the policies integrated into the study?

The researcher (Rodliyah, 2016) does not refer to any specific global and local policies, beliefs or trends that shape current thinking about the pedagogy of writing and literacy in general. The study does not locate itself and its processes in relation to



those policies or ways of thinking. Hence, it does not evaluate the environment of its classroom Facebook page against learning objectives that would be rooted in those policies and conversations. This then seriously affects the researcher's ability to assess the capacity of her Facebook page to generate exciting and motivating learning opportunities that students could find relevant, as well as policy makers and curriculum designers. This limits the impact of the study, with Facebook being argued for largely on the basis of previous studies than on the merits established by the study (p. 83).

- f) The generative perspective: What new forms of practice emerged as a result of the new ways of theorising?

No specific new forms of practice emerge from the study. No framework was proposed for integrating the context of the Facebook classroom page with students' own experiences and goals. This, in turn, made it difficult for the researcher to examine the transformative impact of the learning context that she set up and the impact it had on the ways in which students construct their worlds and themselves in those worlds. While Facebook environment may have some value to students' learning, for CALL studies to result in new practices, it is necessary for these links to be both theorised and critically evaluated. In Rodliyah's study (2016), this would mean investigating what is known by relating the initial assumptions of the study with research from different fields and in the process gaining increasingly precise principles of the learning context that need consideration and further investigation.

The study by Lian et al. (2017) is evaluated next. Appendix illustrates figures and tables from the publication to provide readers with an example of the relationships that the study worked with and examined.

- a) The object of study: What new perspectives were engaged to describe the object of study?

The study (Lian et al., 2017) concerned itself with the development of conceptual and technology-based tools to support students in the process of learning academic writing. The study emerged from the understanding that learning is a multisensory experience and sought to design tools that would allow students to construct feedback on their own writing by integrating information from a variety of perceptual channels (p. 352). To this end, the study turned to neuroscience and, specifically, the neurological theory of aesthetic experience proposed by Ramachandran and Hirstein (1999). The theory identifies the neural mechanisms which mediate human perception and postulates that the same mechanisms, based in evolutionary processes and brain circuitry, form a set of heuristics that artists deploy to titillate the visual areas of the brain (p. 357). Since art is a form of communication, and so is writing, the study embarked on a search for possible links between the genre of academic writing and the universal laws of aesthetic experience proposed by Ramachandran and Hirstein. The study set out to explore opportunities that the application of these laws to academic texts might help reveal (p. 357).

- b) The method of study: What new understandings were identified to devise and justify the method of investigation?

The universal laws of aesthetic experience provided the study by Lian et al. (2017) with principles based in evidence from empirical research. In order to devise a process for data collection and analysis, first it was necessary to represent text abstractly (as a drawing). To this end, the study drew on the concepts from theories of verbotonalism (Yang, Wannaruk & Lian, A-P., 2017), and other neuroscience research, and the

understanding that intonation and rhythm offer a temporal dimension to human speech and behavior (p. 352). Lian et al. (2017) then mapped the laws of aesthetic experience onto intonation graphs of the texts written and read aloud by an experienced academic. A map of relationships was constructed to provide the guidelines for interpreting intonation graphs in relation to the laws the universal laws of aesthetic experience proposed by Ramachandran and Hirstein (1999). The results of this analysis were used a baseline against which the text of a less experienced author was compared (p. 362). For clarity, the study compares 60 seconds of a text produced by the experienced academic with 60 seconds of a text produced by a postgraduate student. The aim was to establish the viability of this approach for future research.

The findings of this small pilot study helped illustrate some important differences between the experienced and inexperienced academic authors and show that the approach devised in the study can be further explored in new research with a greater number of participants, both experienced and less experienced. The method made it possible for the study to offer new, systematically derived tools for approaching concepts such as intellectual density, clarity, comprehensibility, complexity of sentence structure, logical organisation of sentences and paragraphs, balance and rhythm, that were sourced in research that drew on a multiplicity of cognitive systems, not grammar alone. Furthermore, the approach holds other promises for the future studies. It makes it possible for students to examine their writing process without relying solely on the written text. This will allow students to “shift the processing load away from the concern with the meaning of the words (or the text) and, instead, to focus on the aesthetic aspects of texts and their management for the intended impact (p. 352).

- c) The beneficiaries of the study: What new understandings of the research participants’ contexts were engaged and how were they impacted by the study?

The study by Lian et al. (2017) developed from the assumption that the way we write is reflected in the way in which our brains organise information in general in order to generate an aesthetically pleasing effect. The method of the study was inspired by the understanding that learning is a multisensory experience and that students need access to tools enabling them to engage these channels. According to the study by Lian et al. (2017), this multisensory aspect of learning is neglected in the literature on academic writing support, which is largely preoccupied with the lexico-grammatical structures of text organisation (p. 355).

The preliminary results of the study indicate that the prosodic structures should not be ignored and that they are not simply pasted onto the writing in order to create spoken text (p. 370); they are actually built into written text. The researchers argue that prosodic markers are an integral part of the syntax/sequential organisation of written text: “[T]his point is likely to be ignored by teachers who analyse texts through the lenses of linguistics only and who assume that students do too” (p. 371). The researchers therefore suggest that research in academic writing should adopt a learner-centred perspective on its pedagogy. By this they mean that there is a need for tools enabling students to tap into their multisensory meaning-making systems to examine their texts in novel ways that otherwise may escape their attention when the text is considered from the perspective of its written form only (p. 371).

- d) The critical perspective: How was the world integrated into the study?

Drawing on Bourdieu and Bakhtin (cited in Lian et al., 2017), the study by Lian et al. (2017) developed its pedagogic objectives from the understanding that learning is both a social and a personal experience (pp. 352-353). In this view, individuals are

viewed as embodied histories while the texts that they construct can be thought of as time capsules capturing the history of the “conversations” which preceded them and which form their building blocks (p. 353). Therefore, the goal of the pedagogic tools that the study developed was not to replace these conversations with the pedagogue’s perspective of what makes up a text (p. 353). Rather, it was to identify processes that enable students to evaluate, in a multitude of ways, the communicative impact of the “personal histories” that they bring with them into the context of text construction (p. 353).

In this essentially exploratory process, students and researchers explore the relevance of the tools designed for students’ use, each from their own perspective and in relation to the questions that motivate their engagement in those tools. This way of framing the relationship between research and learning draws a distinction between the (theoretical) conversations that motivated the development of the tools for the students’ use, and the (practice-oriented) conversations that will elicit a need for their use by the students. In this way, the interests of the researcher/teacher and those of the learning students are not conflated. This allows each party to analyse and evaluate the impact of these tools from the perspective of their own interests. In this way, each party can approach the use of these tools critically, in relation to the frameworks that inform their engagement with those tools.

The study by Lian et al. (2017) contrasts this exploratory model with the sociocultural approach to literacy (p. 352). It argues that in the sociocultural approach, research does not investigate factors that impact on, and interact with, the ways in which students construct their texts and themselves in them. Instead, teachers working in the sociocultural approach frame the object of students’ learning on their behalf and evaluate students’ success accordingly (p. 353). Indeed, this may be why many findings from neuroscience (Lian, A.B., 2017), like the neurological theory of aesthetic experience proposed by Ramachandran and Hirstein (1999), are being ignored.

- e) The political perspective: How were the policies integrated into the study?

The study by Lian et al. (2017) is a response to the internationalisation agenda of Australian universities and the curriculum renewal policies (p. 351). The study proposed an innovative approach to academic writing, one that invites researchers to step out from the comfort of the regular methods that rely on the “expert’s knowledge” of the academic text and, instead, to engage with the students on their terms and through the cultural frameworks and modes of knowledge construction that are familiar to them (pp. 351-352). In this perspective, the study foregrounded the relevance of students’ histories, a factor that current approaches to academic writing make invisible. The study therefore approached the context of academic writing as creative process, which brings together their combined professional, research and literacy capabilities, one where the students are reduced to the status of a novice learning from an expert, but where they can utilise what they know critically, even subverting the system in order to accommodate for their own personal, cultural or personal styles (p. 352).

- f) The generative perspective: What new forms of practice emerged as a result of the new ways of theorising?

The study by Lian et al. (2017) showed that “the pedagogy of academic writing is not a closed book” (p. 352) and provided some new insights on how the pedagogy of academic literacy could engage in innovative research. First of all, the study showed that the application of the laws of aesthetic experience to the genre of academic writing is worth further study. Secondly, the study pointed to the need for tools that

help students experience the impact of their own thinking about texts differently, using the lenses of different relationships that these tools help them mobilise in their potentially infinite combinations. Thirdly, the study, invited literacy scholars to draw on a diversity of research fields, including less familiar ones such as neuroscience, for new insights and connections.

The analysis of two studies above, based on the questions developed from the critique of education research, sought to illustrate the critical power of these questions, requiring that researchers demonstrate an in-depth understanding of the intellectual context of their study, the ethics of its objectives and its capacity to inspire innovation, rather than reproduction. The framework that this analysis followed can be of value to education researchers especially in the early stages of their study when the literature is explored to define a new project. The proposed framework can also be used to critically analyse research studies, as was done in this section.

The next section summarises the conclusions of this paper in relation to the future of ELTE research studies and research training.

## DISCUSSION AND CONCLUSION

The present paper began with a discussion of the complexity of factors that surround the introduction of the new international curriculum standards that need addressing for the new policies to result in a substantial change. It was also acknowledged that the recent shift toward greater accountability of the teaching programs in higher education opened the space for pedagogic research and innovation. It was argued that, at least in part, the discussions that the policy change may generate space will necessitate critical engagement with the vision that informs new policies, often requiring academics to confront the discourses which support their current practices and to analyse the tensions that this process of confrontation may reveal.

In relation to ELTE programs, one tension that this study brought into focus is the problem of research innovation. It was indicated that the issue of innovation is not new in education studies, however, as pointed out by Thomas (2007), the present stagnation is due to a variety of factors, including research training and examination practices, that are entrenched in the canons of the past and ensure that new teachers and new scholars follow traditional models of thinking that no longer serve education. The issue is important since, in many ASEAN member countries, universities begin research education in the final years of undergraduate studies. It is an uncomfortable feeling to know that following traditional models described in textbooks may not lead to the vision that is outlined in new national policies. What should be taught then if the knowledge that was passed from generation to generation of students is no longer considered relevant nor, indeed, interesting? These are the kinds of questions with which this paper started and which it sought to address.

The present paper treaded carefully so as not to produce answers that would close the conversation from the very beginning. However, in order to offer their own reflections on this matter, the authors identified a series of questions, i.e. a framework, that could provide education researchers with tools for examining frameworks and beliefs that underpin research studies and methods, including their own work. The questions were developed from research concerned with the (over-)simplification embedded in many approaches used in education and the difficulty of changing the *status quo*. In order to demonstrate the value of these questions to research, the authors used two examples of studies in the area of CALL to illustrate the problems that emerge when a study is not well set up. It was shown that difficulties arise when the object of inquiry is not adequately defined in relation to the study objectives, or when research methods do not develop from any concepts or processes that

would justify their relevance to the study objectives. Furthermore, it was shown that research must illustrate how the research findings are to benefit the participants.

In addition, the questions included in the framework challenge researchers to engage elements of novelty in their study. This is a necessary component if studies are to offer insights from a diversity of perspectives and, in this way, generate critically examined knowledge. The critical, political and generative perspectives of research invite researchers to identify the larger context in which their study is located. This includes examination of the study approach and the roles the study attributes to the participants, the ability of the study to address national and international policies in ways that are consistent with the approach, and the capacity of the study to propose novel directions for research and practice.

It is hoped that the proposed framework has the potential to contribute to a change in research so as to promote critical framing and innovation. The questions included in the framework are difficult and ELTE academics may find it easier to work with these questions with postgraduate students than at the undergraduate level. It is beyond the scope of this paper to provide more definitive answers to this dilemma. It may be that the task seems challenging because it is new. Also, the authors ask themselves, what could go wrong? When faced with challenges, undergraduate students would explore the internet (including many cutting-edge seminars on YouTube) for new insights on different ways of looking at problems. They will engage their higher order thinking skills in order to make sense of this information, solve problems that this task creates, engage in teams to help each other, develop independent ideas, begin to think creatively, communicate solutions, learn to respect the opinions of others, show initiative, learn to identify relevant resources, plan for solutions and build their lifelong learning skills. This could be a change from ordinary classes where students are fed information, a strategy that only ensures that innovation is minimised, if only because of lack of time. It may be that addressing the international curriculum standards is not as difficult as it seems if academic staff enable students to examine problems, rather than looking for textbook-based solutions that encourage intellectual compliance rather than innovative thinking.

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## APPENDIX

Figures in Appendix illustrate the regularity of the patterns in the expert's text and lack of this regularity in the text of the student. A closer interpretation of these patterns in relation to the neurological laws of aesthetic experience requires a closer understanding of the method that is described in Lian et al. (2017).



FIGURE 1. Intonation patterns of 60 second of the text written and read by an experienced academic (Lian et al., 2017, p. 362)

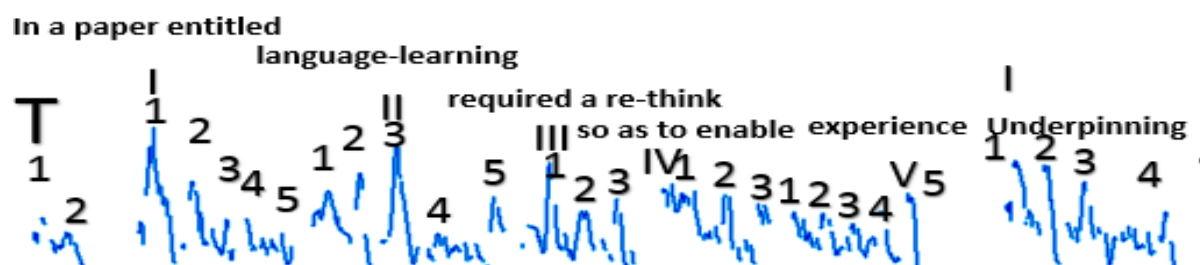


FIGURE 2. Relationships inside of the prosodic groups in the text written and read by an experienced academic (Lian et al., 2017, p. 363)

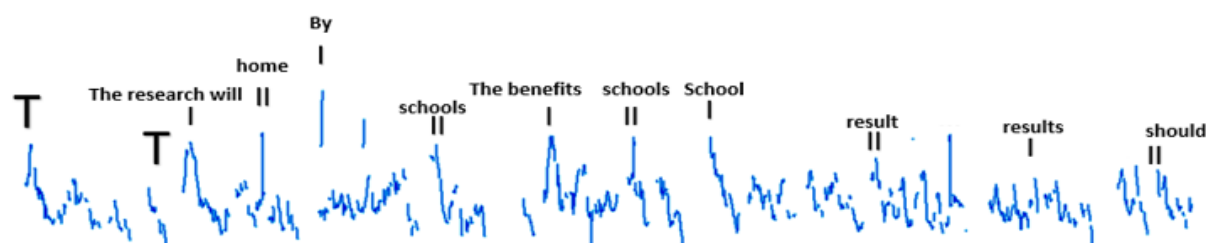


FIGURE 3. Intonation patterns of 60 second of the text written and read by a postgraduate student (Lian et al., 2017, p. 367)

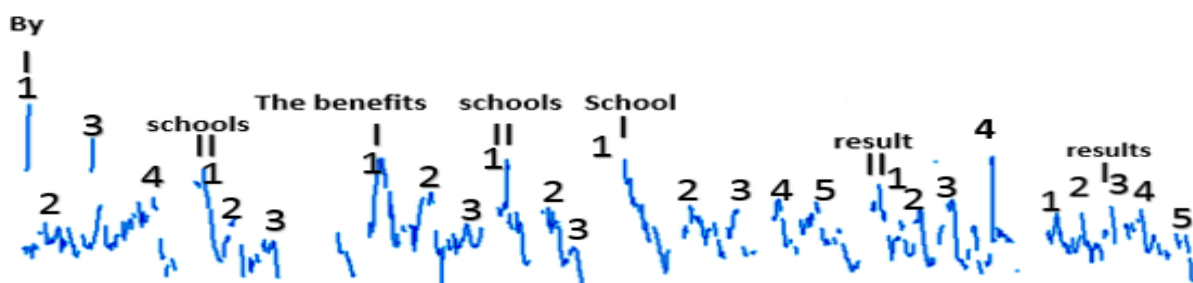


FIGURE 4. Relationships inside the prosodic groups in the student's text. For clarity of the picture, only a few groups were analysed (Lian et al., 2017, p. 367)

TABLE 2. provides a summary of the 60 seconds of the text produced by the expert (Lian et al., 2017, p. 366)

Principle	What it looks like in practice	Purpose
Complexity and grouping: the principle of grouping	Figure 1 shows that the level of information provided by the researcher is high. There are 4 to 5 prosodic groups for a sentence and between 4 to 5 items for each prosodic group.	The author provides the readers with potential object (concept) clues to assist comprehension.
Redundancy, clarity and grouping: the principle of balance	The size of the prosodic groups (Figure 2) is kept consistent (about 4-5 stresses per group).	This gives readers a chance to pace themselves and distinguish between elements which have different information value.
Regularity, peaks and grouping: the principle of contrast	The peak of each prosodic group in a sentence is lower than in the preceding group (Figure 1).	The regularity of the falling peaks helps readers identify relationships between the groups, with peak shifts, at the start of each sentence, clearly demarcating the beginning of a new thought (the key point of reference).
Relevance: the principle of familiarity	Peak shifts tend to have the same height, except for the first sentence (Figure 1)	It is expected, at least in English, that each sentence will begin with the highest pitch (a theme). This expectation allows readers to re-group their attention, prepare for new information and look for new connections.
Headings: the principle of isolation	The titles of the sections always began with a moderate pitch. In fact, in Figure 1, the pitch is lower than in any other prosodic group that followed.	A moderate pitch distinguishes the headings from peak shifts which begin sentences and which, at least in Figure 2, carry the highest stress.

TABLE 3. relates the descriptors of good writing obtained from the expert text to the data from the student's text (Lian et al., 2017, p. 368)

Principle and purpose	Student	Implication
<ul style="list-style-type: none"> <li>• <b>The principle of grouping:</b> The density of information needs to be high, i.e. between 4 to 5 items per sentence and per each prosodic group. This is to provide the readers with potential object clues to assist comprehension.</li> </ul>	<ul style="list-style-type: none"> <li>• Each sentence in Figure 3 contains less than half (two exactly) of the amount of prosodic groups than the text of the expert.</li> <li>• The prosodic groups in Figure 4 are shown to contain 3-5 elements.</li> </ul>	The student, at least in the section that was analysed, provides much less support for the reader to contextualise the subject discussed in the text. This may reduce chances for good comprehension.
<ul style="list-style-type: none"> <li>• <b>The principle of balance:</b> The size of the prosodic groups needs to be kept consistent. This gives readers a chance to pace themselves and distinguish between elements which have different information value.</li> </ul>	<ul style="list-style-type: none"> <li>• Figure 4 shows that the size of the prosodic groups varies from 3-5.</li> </ul>	The lack of consistency impacts on the balance and therefore the rhythm of the text. It may be hard for the readers to organise their expectations as they read the text.
<ul style="list-style-type: none"> <li>• <b>The principle of contrast:</b> The peak of each prosodic group in a sentence should be lower than in the preceding group. Clear differences between the prosodic groups help readers establish the relationships between the groups.</li> </ul>	<ul style="list-style-type: none"> <li>• Figure 3 shows that the peaks of Group I and Group II in a sentence show some falling pattern but not as distinct as in the text of the expert.</li> <li>• Figure 4 shows that the peaks within the prosodic groups (1, 2, 3, 4) do not always follow the falling pattern. Figure 4 shows one sentence with peaks of equal</li> </ul>	The sentences do not have more than two prosodic groups. Every sentence appears to be equally important and no clear pattern emerges that would support easy differentiation of relevance. This may hinder, rather than facilitate, text comprehension.



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<ul style="list-style-type: none"><li>• <b>The principle of familiarity:</b> Peak shifts should have the same height, except for the first sentence. Using the same pattern for indicating the start of a new sentence provides readers with clear signals to prepare for new information.</li><li>• <b>The principle of isolation:</b> The titles of the sections begin with a moderate pitch. A moderate pitch distinguishes the headings from peak shifts which begin sentences and which, at least in Figure 2, carry the highest stress.</li></ul>	<p>height.</p> <ul style="list-style-type: none"><li>• Figure 3 shows that peak shifts, with one exceptions, tended to have the same height.</li><li>• However, not all sentences started with the highest peak.</li><li>• On average, the titles had a moderate pitch. They appear on the graphs as isolated peaks.</li></ul>	<p>The strategy to use the highest pitch at the start of a sentence was applied mostly, but not at all times. An uneven pattern may interfere with readers' expectations.</p> <p>The headings are clearly distinguishable. This may suggest that they are well-formulated as they can stand on their own.</p>
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### ABOUT THE AUTHORS

Dr. Ania Lian is one of the key senior academics in the International Graduate Centre of Education at Charles Darwin University, Australia. Dr. Lian has a high international profile in research and doctoral students' supervision in Computer Assisted-Language Learning (CALL) and is Vice President of AsiaCALL Association (Research & Innovation).

Mrs. Widya Hanum Sari Pertiwi is a PhD student in the International Graduate Centre of Education at Charles Darwin University. Her research thesis is on teaching research methods in undergraduate English language teacher education programs in Indonesia.