Accelerating Academic Literacy Development: Issues, Possibilities and Challenges for Integrating Scholarly Writing Development into Mainstream Curriculum in Australian Higher Education.

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Abstract

This thesis presents a longitudinal case study of the collaborative integration of a pedagogy for *Accelerating Academic Literacy Development* (AALD) into a mainstream STEM course at an Australian South Coast University. The distinguishing feature of the pedagogy is a *conceptual self-help tool* based on principles of genre analysis. The purpose of *teaching* genre analysis is to empower students to analyse course-specific readings as models for accelerating *their own academic literacy development*, while a *collaborative pedagogy* is intended to empower a discipline specialist to adopt the AALD approach and *autonomously* continue to develop it as her own.

This study details the successful and sustained curriculum-integration of the AALD pedagogy into a mainstream semester-length course by two STEM lecturers, each in collaboration with the author. It examines institutional and personal contexts and conditions for *possibilities* and *challenges* to a more widespread adoption of a curriculum integrated AALD focus.

Findings indicate that the two STEM lecturers derived sufficient confidence from their initial co-teaching, and from their familiarity with the course-specific genre analysis worksheets, to retain, and modify, the AALD module within the same course in subsequent years. Implications of the findings for the scalability of the AALD are discussed in light of current contextual challenges.

List of Abbreviations

AALD	Accelerating Academic Literacy Development
ALD	Academic Literacy Development
ALL	Academic Language and Learning (Adviser)
AMEP	Australian Migrant Education Program
ASCU	Australian South Coast University
ASD	Academic Staff Development (Adviser)
EAL	English as an Additional Language
ICAI	International Center for Academic Integrity
L1	English as first language
L2	English as a second language
LBTL	Language based theory of learning (Halliday)
LOTE	Language other than English
MELT	Models of Engaged Learning and Teaching (Willison)
NES	Native English speaker
NNES	Non-native English speaker
RSD	Research Skill Development 2007/2019 (Willison & O'Regan)
SFL	Systemic Functional Linguistics (Halliday)
SL-1,SL-2	STEM Lecturer1, STEM Lecturer2
STEM	Sciences, Technology, Engineering, Mathematics
TaU	Teaching at University (an Academic Staff Development program)
TESOL	Teaching English to speakers of other languages
ZPD	Zone of Proximal Development (Vygotsky)

Student Certification

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree. I give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

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Signed:

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I dedicate this study to the memory of my dear parents,

Max and Gertrud Staniek, and my younger sister

Gundula Howell (1943-2004)

Chapter 1: Introduction

‘Teach us how to do it properly!’

The comment: ‘Teach us how to do it properly!’ was an anonymous student’s response to a question in a large survey on Academic Integrity policies which was administered across six Australian universities. The question probed how well students were ‘satisfied with the way that academic integrity is communicated and managed’ at their university (Bretag et al. 2014). This student found information on policy was not enough and explained that it was the *practice* of learning 'how to do it’ that was needed:

> Rather than telling us all the consequences of breaching the academic integrity policy, teach us how to do it properly! This means doing it more than once. A number of lecturers accept / expect different things and I think they need to all be on the one playing field in order for academic integrity to be maintained (Bretag et al. 2014, p.1161)

The survey report responded to this student’s plea by suggesting that ‘engaging activities’ be provided for practice in citing and referencing, and that these be repeated in different discipline contexts, media and forums throughout the undergraduate years (Bretag et al. 2014, p.1167). However, this student’s concern raises the underlying issue that students very often do not understand the reasons why the citing and referencing conventions are important in scholarly writing. A shift in focus to asking ‘why’ draws attention to a deeper reason for the referencing system than the ‘surface level’ mechanics of ‘doing (the citing and referencing) properly’.

The present study pursues the argument that the practice of referencing source texts is fundamental to tertiary students’ writing process. The prevalent emphasis has been on

students' application of the mechanics of referencing conventions, without support for their development of a deep understanding of why there are conventions of citation practices, and how the process of referencing may assist their learning of a discipline (Liardét & Black, 2016). This argument responds to the survey student's plea (above) that academic staff should be 'on the one playing field'. By recognising citation practices as fundamental to academic literacy, the argument indicates that 'a common playing field' is to be found in the underlying principles of referencing in research contexts, rather than in standardising the mere mechanics of referencing (Chanock, 2006; Shaw & Pecorari, 2013). Novices of any new discipline are expected to learn that, by drawing on the knowledge found in their readings, and by specifying their sources, they can demonstrate how they understand the source texts, whether they agree, or how they might critique the arguments with counter arguments (Wingate, 2012b). Therefore, his study's logic is based on the importance ascribed by the tertiary academy to research-informed writing, with a focus on the purpose and value of citation practices that are realised in the form of *writing-from-sources*. It posits learning how to think, argue, and write like a researcher as integral to content learning throughout undergraduate education.

The reading of research-informed texts provides learners with both subject content and disciplinary ways of articulation, as well as modelling how to argue and think critically. In addition, diligent learners who become immersed in reading academic texts may gradually acquire the common features of their discipline's language and academic literacy conventions. However, the core of this study works on the proposition that the slow pace of subconscious acquisition of a discipline's academic literacy can be accelerated by conscious processes of deconstructing academic texts and re-using the discipline's language patterns, generic structures and citation practices. This process was captured in the author's coinage of Accelerating Academic Literacy Development

(AALD) and realised as the *AALD self-help tool for learners and a pedagogy for teachers.*

This study then raises the question of *how a self-help approach to the development of scholarly reading and writing is to be assured a place in mainstream learning and teaching in higher education.* This is the question that originally motivated the inquiry of the present study.

This chapter first sets the current institutional context of cultural and linguistic diversity in the Australian tertiary education sector. It does so within the broader context of issues for learning and teaching related to the global changes to higher education during the past three decades. The second section provides an account of the author's initial collaboration with a discipline lecturer and the joint construction of a pedagogy by utilising the AALD self-help tool. It explains the author's coinage of 'harvesting language' from academic readings by an elementary process of Genre Analysis. It then introduces the three phases of the longitudinal case study. The concluding sections explain the timeline of the thesis and provide a brief overview of the chapters to follow.

1.1 Issues to be addressed.

Three major issues addressed in this study are the *conflicting conceptions of the nature of academic literacy*, the role of *reading for writing* in higher education, and the *integrity of undergraduate learners' development of scholarly writing* in Australian tertiary education. The argument is made that learning to read and deconstruct academic texts provides a basis for simultaneously both discipline content learning and academic literacy.

1.1.1 Conflicting conceptions of the nature of academic literacy

A widespread but simplistic conception that equates academic literacy with language fluency is the basis for the practice of relegating the development of academic literacy

to remedial support, and for the 'deficit' discourse that labels such students as deficient or 'disadvantaged' (Wingate, 2015). Another misconception fails to realise that the details of the citation practices as part of academic literacy vary from discipline to discipline.

Defining academic literacy: The starting point for defining academic literacy for this study is: '*the ability to communicate competently in an academic discourse community*' as formulated by Wingate (2015, p.6). This is a broadly-based, generic definition that indicates it is applicable to a multitude of contexts. When applied to a specific discipline, the definition requires an adjustment. To suit the context of assignment writing within a specific discipline, academic literacy is expanded as:

> *'the ability to use the written language in which academics within (this specific discipline community) communicate with each other'*

In this context, the concept of **'**language' encompasses the entire range of vocabulary, word combinations, phrases, sentence structures and the sequencing of overall structures, references to source use and citation practices of a discipline specific research report or article.

1.1.2 The role of 'reading for writing'

The nature and amount of academic reading required at undergraduate levels in the current context of Australian universities is relatively unknown and is under-represented in research in the literature. Anecdotally, the in the local, Australian context, there appears to be a tendency to avoid the inclusion of academic articles in students' reading lists during the first two undergraduate years, for the understandable reason that for many students the language and content would be beyond their comprehension and therefore a waste of their time.

However, the exclusion of academic readings from their study requirements means that students are deprived of academic language models which they might 'intuitively' engage in their own writing development. Without models of the academic writing of their course content, students also have little access to contextualised examples of how the citing and acknowledging of sources function in their discipline. The written material provided as lecture notes may not often mirror the language or the citing conventions which students need to aspire to master. The language and source references of lecture materials, like also those of many textbooks, tend to be of the didactic, that is, 'teacher-talk' variety and thus unsuitable as models for students' written assignments.

1.1.3 The development of scholarly writing

The lack of readings that would provide students with suitable models for their academic writing development raises the problem of conflicting expectations for early undergraduates. While the practice has the appearance of protecting students and giving them time to find their way into university practices, new students are nevertheless expected, at the very outset, to understand and apply the conventions of academic literacy or risk censure for plagiarism. This conflict of expectations of students' academic performance could be resolved by the integration of a carefully structured approach to introducing novice learners to those elements of full-scale research papers that are relevant to their initial writing and citing needs. Such an approach emerged in the collaborative design of the AALD pedagogy described in this study.

By embracing all forms of communication, from verbiage, structures and notation conventions, the product from 'harvested' language embraces multiple academic discourse communities, and therefore the plural form of *academic literacies* (Lea &

Street, 1998). However, the generic form can also be modified and applied to any other discourse communities. For example, in the context of preparing university students and graduates for employability, this AALD framework might also be harnessed for their self-help in developing their 'workplace literacy'.

1.2 Current institutional context: Diversity, Changeability, Barriers

The institutional context of Australian higher education has experienced four decades of continuing **changes** from widening local and international student participation, the growth of marketisation of education to the inventiveness of digital technology and more. While many of the changes furthered and accelerated advances in knowledge world-wide, others presented issues for academic language, learning and literacy development. For others again, they presented **barriers** to the uptake of proposals by academic language and learning (ALL) advisors to provide support to lecturers in changing learning and teaching methodologies designed for assuring learners' academic literacy development as integral components of undergraduate coursework.

1.2.1 Diversity

The growth of student diversity in Australia began with the gradual widening of participation by local students in the latter half of the 20th century. It was greatly accelerated in the 1990s by the introduction of admitting fee-paying international students in line with similar moves in Anglophone universities worldwide.

Widening Participation: Local Students: In Australia the post Second World War migration from European countries during the 1950s and 1960s, together with the welcome extended to refugees from the subsequent Cold War, had already begun to diversify the student demography (Anderson & Eaton, 1982a). The diversity widened further when the Whitlam Labor Government introduced free university education in 1974 (Anderson & Eaton, 1982b). Subsequently, the Dawkins Reform expanded the

size of the university system and population by mergers with Colleges of Advanced Education and former Teachers' Colleges (Anderson & Eaton, 1982a; Chanock 2011a; Dawkins, 1988; Stirling & Percy, 2005). The initial aim for the reform was to provide equity of access for non-traditional students including learners from low socioeconomic backgrounds and non-traditional groups such as mature-age students returning to study. In addition, by tapping the capacities of the internal population, the aims of the Dawkins Reform were both to satisfy equity of access for individual learners and to increase the labour force and thereby boost the economic growth and prosperity of the country.

A decade later, in 1997, the UK similarly instituted reforms by implementing the report by the UK National Committee of Enquiry into Higher Education ('Dearing Report': *Higher education in the learning society*). This report targeted traditional elitism of access by requiring higher education to: –

> – encourage and enable all students – whether they demonstrate the highest intellectual potential or whether they have struggled to reach the threshold of higher education – to achieve beyond their expectations (Dearing, 1997, Chapter 1.4).

The UK higher education sector was charged with safeguarding 'the rigour of its awards and supporting the aim of being 'at the leading edge of world practice in effective learning and teaching' (Chapter 1.4). Among the explicit objectives for widening participation was that of reducing the disparities in participation in higher education between groups (Chapter 7.1). The high aspirations of providing greater equity of access to students, both in Australia and the UK, also needed to be accompanied by strategies that recognised that the language and culture of academic institutions was an unfamiliar environment for all beginning students, including those

with English as their first language (L1). Despite apparent familiarity of English terms and phrases, discourse patterns, and citing conventions, students needed to learn that there are significant differences, from one discipline to another, in the academic discourse and conventions of citing and referencing, and they needed to learn how to help themselves to master those language variations and conventions. In the Australian context, as in the UK, of research findings during four decades of research into higher education, such strategies would need to be integral to the learning, teaching and assessment processes across the entire curriculum (Chanock et al., 2012; Dunworth, Drury, Kralik, & Moore, 2014; Fenton-Smith et al., 2017; Taylor, 1988 p.64; Wingate, 2006.) The concept of integrating academic discourse into the learning, teaching, and assessment practices of core curricula, has been promoted with increasing insistence in recent years (Arkoudis & Kelly, 2016; Arkoudis & Harris, 2018, 2019; Chanock, 2017; Wingate 2015). Nevertheless, although there has been some progress, barriers remain. A 'deficit perspective' that views learning needs as deficiencies persists, leaving disciplinary discourse to remedial support, rather than as entry points for guiding learning development (Arkoudis, 2014, Chanock, 2017). This perspective is of a particular concern for equity, as a failure, in the changing of higher education, to take the increased cultural and linguistic student diversity into account (Wingate, 2015).

International Students: Increasing Diversity: Student diversity in higher education increased inexorably with the growth of the global economy, as the English language became the lingua franca for global market transactions. The ability to communicate effectively in English came to be viewed as an attribute for future leaders in the world market which drove large numbers of international students to seek English qualifications in Anglophone countries (Findlay & Tierney, 2010). In consequence, the English language became a marketable commodity, and Australia was well placed to compete for full fee-paying international students particularly in the Asia-Pacific region. Australia has a history of receiving international students since the Colombo Plan in the

1950s (Chanock, 2011, p. A39). The Colombo Plan was an international aid strategy for sponsoring Asian students in order to promote the economic progress in countries of 'third world' which was the term used at that time (Bradley et al., 2008). The contemporary phase of internationalisation began around the late 1980s, when the educational *aid* for international students was replaced by educational *trade* within the world economy (Bradley et al., 2008, p.88). By 2015 the revenue of international education was identified as Australia's third highest export industry (Deloitte Access Economics, 2016).

While the main driver for internationalisation had changed the international aid strategy into a lucrative industry for the economy and support for the country's long-term skills needs, it was nevertheless also envisaged that internationalisation would yield educational benefits. It was an assumption expressed in the 2008 Review of Australian Higher Education in Australia that it would promote the education of Australian students for a global workforce, and the exchange of knowledge across the region (Bradley et al. 2008, p. 88). However, while gaining effective English communication skills was ostensibly a fundamental purpose for international students, the question of where in an institution the responsibility should lie for promoting and monitoring international students' development of English as a second or additional language (EAL) was, and continues to be, an unresolved issue.

1.2.2 Changeability

The decades of accelerating student diversity, through widening access locally, and massification globally, has been a period of continuing changes, raising many further issues and leading to problems that needed to be addressed (Chanock, 2011a). The increase in student diversity may have the potential for widening learners' horizons and furthering mutual understandings across cultures and languages. However, the marketisation of education and the world-wide phenomenon of digitisation imposed

altered assumptions and values on long-standing traditions of higher education (Czerniewicz, 2018). Digital technology, the creation of the internet and emergence of e-learning provided unprecedented speed of access to information for learning, teaching and research. Digitisation dramatically changed the tempo of social interaction and, in higher education, it established the expectation of accelerating the rates of learning, teaching and research. The availability of online learning and the use of learning management systems (LMS) became indispensable elements for higher education. They afforded useful flexibility for learners and teachers but also contributed to the potential reduction (or even elimination) of personal contact. These decades of widened student access to education were also a period of accelerating changes in world-wide technical and electronic developments. They enabled dramatic changes in the tempo of social interaction and, in particular for higher education, the speed of access to information for learning, teaching and research, creating new possibilities, but also raising new challenges.

The changing contexts in the decades since the 1980s held the promise of equity of access to higher education for non-traditional students. The changes were expected not only to benefit the reputation of the tertiary sector. There was also an expectation of advantages for broadening local tertiary students through the opportunities to interact with international students and extend their horizons to a world-wide range of cultures. No doubt the presence of multilingual international students on campuses has provided opportunities for stimulating, outward-looking learning environments for local Australians. As the changes in student diversity and the high-speed pace became the norm, in overall terms, the advantages were taken for granted by tertiary institutions, staff and students. The funding boost derived from international student fees was needed by Australia's universities, while high-speed internet access to information and

a growing range of technical and computer-based affordances for supporting the introduction of e-learning were similarly welcomed.

While widening participation of 'non-traditional' local students and the presence of international students had the potential for broadening the learning experience of all, this potential was not always realised because of the difficulties associated with academic language (Chanock, 2011), and of a widespread "failure to recognise that discipline studies confront *all* students with new and perplexing cultures of knowing and cultures of discourse". (Chanock, 2011, p. A37, original emphasis).

1.2.3 Issues as barriers

Issues for academic language, learning and literacy development become barriers for discipline lecturers and students to focus on academic language, seeing it as a diversion from their core task of mastering discipline content. Three issues that affect both international students and local students result from the complexities associated with academic language for learning at university level.

The first issue has been the prevailing institutional perspective on academic *language and academic literacy* as distinct from, and unrelated to, academic content learning. As a consequence, the need for academic literacy development has been broadly viewed by the academy solely in terms of English language fluency and correctness of grammar, thus fostering only a surface level approach to academic literacy development.

The second issue, which affects academics in this era of speed, is a lack of time for staff to engage with a language-orientation to learning and teaching that would add to the demands on their time (Miller, 2019).

The third, and possibly least visible, issue arises for lecturers who are unaware of the processes that may have led to their own successful mastery of the academic literacy

of their discipline. That is, it could be explained by prolific reading required in their postgraduate studies, whereby inadvertently drawing on the concept of reading-for-writing, and using the features of writing-from-sources academic literacy, to academic writing are drawn. It may appear counter-intuitive that academics who are, in practice, the expert users of the conventions of their own discipline leave writing processes at an implicit level.

Academics may be only peripherally aware of the writing processes that depended on their disciplinary reading during their own undergraduate and post-graduate studies (Turner, 2010). For discipline experts, the processes of drawing on discipline-relevant readings as a basic strategy for academic writing may have become internalised, as if by osmosis (Turner, 2010), meaning that immersion in the literature allows each academic to 'soak up' disciplinary styling. Therefore, these processes are successfully applied by the discipline experts in their own scholarly writing, but the processes are 'not able to be explained or expressed' by the same experts (Skillen & Mahoney, 1997). The lack of articulation of scholarly writing processes renders the teaching of the discipline partially dependent on student intuition, even during times of apparent direct, didactic instruction. This may be a reason why discipline experts sometimes resort to surface level explanations of the mechanics of a discipline's citing conventions. While the underlying logic that applies as 'the one playing field' that is common for all research disciplines is tacitly understood by experts, it may be taken as obvious, and therefore remain occluded, or a 'blind spot' in curriculum design.

<u>Academic literacy development support as mediated learning:</u> In light of the changes occurring across Australian higher education, and the need for enhanced student disciplinary language, learning advisers were appointed in the early 1990s to provide remedial support for students from diverse backgrounds. They began to ask to what

extent and in what ways institutions should provide Academic Language and Learning (ALL) programs for students. In other words, there was a desire on the part of ALL advisors to help all students deal with the changes discussed above. By providing academic language learning that was discipline-orientated, it was intended to 'create research and teaching connections that develop synergies in educational development that are able to work with language and learning simultaneously' (Percy 2014, p.1194). In other words, academics' research practices and their teaching practices were to be brought to bear on student learning.

A persuasive approach to making scholarly writing processes visible (Hattie, 2015) was found in the collaborations between ALL advisers and academic staff, coming from a language perspective. There has been a groundswell of collaborative innovations between ALL practitioners and discipline lecturers for embedding or integrating academic literacy into core subjects or whole degree courses and yet there are substantial problems associated with these collaborations. This thesis had its antecedents in a collaboration between an ALL adviser (the author of this study) and an academic, where the author demonstrated a persuasive approach to making the logic of academic language and writing visible. A description of the case study of this collaboration follows.

1.3 The personal context of Accelerating Academic Literacy Development

This is a brief overview of the theoretical and pedagogical basis for the collaborative integration of a pedagogy for *Accelerating Academic Literacy Development* (AALD) within a mainstream course within the STEM Faculty (Science, Technology, Engineering and Mathematics) at an Australian South Coast University (ASCU). The account outlines the sustained curriculum-integration of the AALD pedagogy into a

mainstream semester-length year-2 course, taught successively by two STEM lecturers, each in collaboration with the author in the role of academic staff developer and ALL Advisor.

The AALD pedagogy addresses the three issues found in previous studies of collaborative approaches to the initial adoption of curriculum-integration. The study of the AALD pedagogy provides an example of overcoming the barriers of institutional resistance, lack of time for academic teaching, and the prevailing institutional focus on academic content learning and the consequent minimisation of students' academic literacy development. The case study also informs how two academics could adopt, and independently maintain, the AALD-based pedagogy in a mainstream curriculum. By drawing on sociocultural theory, which views learning as *language-based* and *interactive*, the approach to the pedagogy is founded on a 'social constructivist' paradigm. This paradigm supports the perspective that, in the context of any cultural discourse or learning community, *knowledge is individually constructed* by the learner and *socially mediated* by an expert, a teacher or a more advanced peer.

A conceptual self-help tool for genre analysis, based on these parameters, was developed by the author, and informed the AALD pedagogy. This pedagogy was jointly constructed by the author and a lecturer of a semester-long undergraduate course in one of the ASCU's disciplines in the STEM Faculty. In this study, the academic's pseudonym is STEM Lecturer-1 (SL-1). A second lecturer (SL-2) subsequently took over the responsibility for the course and associated pedagogy. Both lecturers adopted the concept of integrating a method of 'harvesting language' as a conceptual self-help tool for inducting learners of the year-2 class into the principles of academic literacy. The principles of the conceptual self-help tool, and its application in teaching are detailed in chapter three.

This longitudinal case study has had a long gestation time. A brief account of the

genesis of this research will assist in gaining an overview of the author's collaborative role in the construction and teaching of the AALD pedagogy and the timing of sourcing and gathering data. There were five points of time. The first occurred in 2011, three years before the author's enrolment in the higher degree. The other four took place in 2014, 2015, 2016, and 2017, as the longitudinal opportunities were found and developed. A diagram of this timeline is found in Appendix A1.0.

1.4 Research Questions, Significance, Chapters

1.4.1 The two overarching research questions

In view of the gaps in understanding about how collaborations between ALL advisors and discipline academics form and are maintained in order to enhance student academic literacy, two overarching research questions emerge from the case study:

1. What factors and conditions created *possibilities* for the two individual discipline specialists at the centre of this study to adopt, and autonomously maintain, the pedagogy of integrating an approach for Accelerating Academic Literacy Development (AALD) into the core curriculum of a second-year undergraduate course?
2. What challenges and possibilities were identified for a more widespread adoption of academic literacy pedagogy into undergraduate core curricula?

1.4.2 Significance of this study

This study contributes a research-informed collaborative methodology for assisting academic teachers to overcome certain personal barriers to adopting the integration of academic literacy into the coursework of their disciplines.

It presents a pedagogy, within a sociocultural paradigm, for introducing academic

literacy development into a mainstream coursework curriculum. Its findings demonstrate how discipline academics, by collaborating with language and learning academics, are able to discover their own *tacit knowledge* of the crucial role of *reading* for *writing* in the process of academic *writing from sources,* and for articulating this knowledge within their curriculum.

Its significance is that it addresses fundamental problems that have arisen for academic language, literacy and integrity that are of concern for universities, particularly in the 21st century higher education context of student diversity. It makes a contribution towards interpreting possibilities of achieving the objective of inclusive academic literacy development practices in mainstream learning and teaching.

The study contributes towards a methodology for inducting teaching staff into a basic concept for integrating discipline-based reading and writing development into mainstream coursework curricula. The concept of a learners' conceptual self-help tool, for accelerating academic literacy development (AALD), offers significant possibilities to be further explored in support of initiating mainstream learning and teaching practices that are inclusive of the student diversity of 21st century universities.

1.4.3 Thesis Chapters

There are seven Chapters:

Chapter 1: The Introduction. This has set the scene for this study.

Chapter 2: Literature Review. The literature review provides a background to the present drive in Australian tertiary education to integrate academic literacy into mainstream curricula of undergraduate education. It then introduces three perspectives on academic literacy development, and it concludes with a perspective on academic literacy in terms of research integrity.

Chapter 3: Accelerating academic literacy development. This chapter introduces the concept of 'harvesting language' for the personal accumulation of a stock of academic vocabulary and discourse patterns. A basic approach to genre analysis and its adaptation as the AALD conceptual self-help tool and pedagogy is outlined.

Chapter 4: Methodology and Method. This chapter outlines the methodology for a longitudinal case study of the sustained integration of an academic literacy development focus into a unit of a second year STEM subject.

Chapter 5: Data, analysis, and findings from Phases one and two of this study. Data comprise interviews with two adopters of the AALD curriculum-integrated approach, and documentation of worksheets and information handouts from the initial collaboration with the author in each instance (2014 and 2015).

Chapter 6: Data, analysis, and findings from Phase three.

Three sources of data obtained from a range of the University's faculty-based staff are: first, in 2016, an anonymous staff survey on views of academic literacy development; second, detailed interviews with four volunteers following the survey; and third, in 2017, a focus group discussion with the staff of a faculty-based group of academic language and learning advisers. Analysis is conducted and the findings summarised.

Chapter 7: Discussion. The findings from Chapters 5 and 6 are discussed in the light of this study's research questions. Limitations of this study are listed, and further research is suggested to probe the effectiveness of the collaborative teaching of AALD in achieving learner and teacher autonomy.

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Chapter 2: A Review of the Literature

Introduction

This chapter reviews the literature on academic literacy development (ALD) for coursework students in universities of Anglophone countries and other locations where English is the medium of instruction. It sets the historical context of the drive to integrate academic literacy into mainstream teaching, and it examines theoretical concepts used for explaining practices of academic literacy, integrity, and inclusivity in Australian tertiary education. The literature search and synthesis were conducted from the perspective of researchers and practitioners of Academic Language and Learning (ALL) support and development because these practitioners have been major proponents of inclusive student access to academic literacy (Wingate, 2015). (Note that, for simplicity and to save confusion, in this study, the term 'ALL advisors' is used throughout, although initially different terms were in use.)

The topic of this thesis is to explain the process of Accelerating Academic Literacy Development (AALD). The approach taken in this literature review is 'integrative', as outlined by Torraco (2005), as appropriate for *"new or emerging topics that would benefit from a holistic conceptualisation and synthesis of the literature to date"* that is likely to lead to a new model or framework (Torraco, 2005, p.357). An integrative review of the literature was deemed appropriate for this case study for connecting insights from the literature on theories and practices of academic literacy and academic integrity, for the sake of inclusive learning and teaching practice. The context of the review is the internationalisation of higher education and the expansion of student diversity in Anglophone countries, with a particular focus on Australian higher education of the twenty-first century.

The aim is to identify pathways for discipline specialists to promote their students' ALD as a coherent, unifying educational framework, and to overcome personal and institutional barriers to achieving this. The research literature is therefore consulted for evidence of both support and challenges for the acceptance and sustainability of ALD in the mainstream of undergraduate curricula.

The structure of this chapter combines three mutually supporting perspectives for the integration of ALD into mainstream curricula:

- The review begins with a brief historical overview of the drive to integrate academic literacy into mainstream curricula of undergraduate education in Australian tertiary education.
- The second part provides three perspectives from social constructivist theory on academic literacy**,** and contemporary practices for furthering tertiary students' ALD.
- The third part examines academic literacy in terms of research integrity.

2.1 Integrating academic literacy into mainstream curricula

Calls for curriculum integration of ALD into mainstream academic content teaching date back as far as the late 1970s, when higher education in Australia had begun on a path of introducing major changes to the traditions of tertiary education.

In the context of the widening of cultural and linguistic diversity in Anglophone universities, success in accommodating the learning needs of students from 'non-traditional' backgrounds, and of international students for whom English is a second or additional language, depends on a 'deep level' understanding of the concept of academic literacy. While academic teachers, having mastered the practice in their own studies, would implicitly know the complexity of academic literacy, they may not normally see a need to articulate it as a concept. For this reason, it is likely to be

treated at a 'surface level', as no more than a fluent command of the English language.

Consequently, a major issue for learning and teaching in 21st century higher education has been the discourse of 'deficit thinking', and 'remediation' by which students from non-traditional backgrounds are marginalised (Hull & Rose, 1989; Lave, 1996; Smit, 2012; Stirling & Percy, 2005; Wingate, 2015). Views of academic language, academic learning, and academic literacy have varied considerably among students, academic teachers, and ALL practitioners, and the institutionally projected perspective has remained locked in the traditional division of academic language from academic content learning.

2.1.1 Integrating academic literacy development: A historical overview.

In the early 1990s, support for the development of language and learning in the Australasian and UK tertiary sectors tended to focus narrowly on remediation for addressing low levels of English vocabulary and grammar among international students (Percy, 2019; Stevenson & Kokkinn, 2007; Turner, 2011).

From a practice perspective, reliance on remedial services is considered an inadequate approach to supporting students' literacy and learning, because it may fail to reach the very students who most need development of their academic language, literacy, and learning (Wingate, 2006). It also ignores the diversity of local or international students whose first language (L1) is English, but who nevertheless need induction and support (Arkoudis, Baik & Richardson, 2012; Briguglio, 2011; Lave, 1996; Wingate, 2006).

From a conceptual perspective, Wingate (2015) argued that the discourse of deficit and remediation is based on misconceptions. One flawed concept is the view that academic literacy is synonymous with 'linguistic competence' and that the number of students whose academic writing is in need of remediation is relatively small. This view

represents a failure to recognise the complexity of academic writing and, above all, the fundamental role of reading in academic writing. Such misconceptions direct the attention towards a perspective of students as being in transition (Wingate, 2007, 2015).

There is much research that supports the position that all learners must repeatedly deal with educational transitions from one context to another. Whether they are new to university, or moving from discipline to discipline, or into employment, learners must, each time, adjust to different sets of communication practices that are valued and expected (Arkoudis, 2014; Kift, 2009; Wingate, 2007). It applies not merely to the first-year experience in higher education (FYE), or 'non-traditional' students, international students, or the country's residents for whom English is a second or additional language (L2, EAL). Managing transition also applies to some extent to seasoned learners each time they move into a new and unfamiliar domain of their studies as, indeed, into a new workplace or social environment.

Early practitioners and researchers in the applied field of ALL services warned against the discourse of deficit and remediation on both practical and theoretical grounds. Gordon Taylor argued, as early as 1978:

> A writer's poor English is often bound up very closely with his confusions about the content and rhetoric of his various disciplines. And, as a consequence, no English expression programme can really succeed *unless we create conditions under which subject specialist and English specialist are encouraged to cooperate*. (Taylor, 1978, p. 34, emphasis added).

By 1988, Taylor, in collaboration with a pioneer group of five 'language tutors', published a small volume, *Literacy by Degrees* (Taylor, et al., 1988). The authors of the

six chapters, Brigid Ballard and John Clanchy, Vic Beasley, Hanne Bock, and Peggy Nightingale, expanded on Taylor's 1978 concept by contributing from their advisory and teaching experiences. That volume addressed the concerns on language, learning and literacy development that the ALL advisors who felt 'pinned to the margins' worked to adjust 'from the margins to the centre' during the three decades that followed (Stevenson & Kokkinn, 2007; Vered, Thomas, & Emerson, 2019).

2.1.2 Academic Literacy Development: Perceptions and Practices.

Australian ALL advisors who were newly appointed to deal with the growing influx of international students in the early 1990s worked collaboratively with staff, students and each other. Their aim was to move their work 'from the margins to the centre' of supporting equitable learning and teaching practices (Chanock, 2017; Stevenson & Kokkinn, 2007; Vered, Thomas & Emerson, 2019). Initiatives for integrating academic literacy into mainstream curricula were enacted by individuals, Government-funded teaching projects and research Fellowships (Percy & Skillen, 2001; Skillen, 2006; Skillen, Merten, Trivett & Percy, 1998).

Around 2010, almost a decade of funding, first through the Australian Learning and Teaching Council (ALTC), and then by the Office of Learning and Teaching (OLT). A comprehensive summary of projects funded was for the Australian Government's OLT Arkoudis & Doughney (2014). the Good Practice Report: English language proficiency.

These initiatives produced feasible alternatives to remediation that would help to ensure students' learning and further development of the literacies of their disciplines and sub-disciplines. Many other initiatives, however, do not appear to have followed this development across their institutions, thus confirming and continuing Chanock's concern of 1994, that ALL advisors were 'swimming against the current' of their organisations' expectations. Similarly, there was little institutional encouragement,

either for permanent curriculum embedding, or the extension of successful projects from one discipline to another. In terms of perceptions and practices, academic literacy has typically continued to be treated by the academy as a matter of remediation because of the perceptions that language is tangential, instead of fundamental to content learning.

Academic literacy and remediation: From the early 1990s, after the widening of local student participation of the 1980s and the steep growth of international student enrolments, Australian universities rapidly expanded the number of advisory centres and appointments of ALL advisors tasked to provide remedial support.

The new ALL advisors of the 1990s were generally expected to provide remedial assistance in written English for international students who were non-native English speakers (NNES), as well as other students deemed to be 'underprepared' for university writing (Chanock, 2011). The new appointees, however, found remediation an unsatisfactory approach for promoting student learning (Stirling & Percy, 2005). By 1994 Kate Chanock was ready to declare, 'What we have moved away from is the idea that our students' needs are remedial', and that 'there has developed an awareness that all students are confronting a new kind pf learning when they enter university', but adding that advisors 'had to swim against the current' of what was expected of them by the institutions (Chanock, 1994, p.9).

By 1994, the possibility of mainstreaming the teaching of academic discourse was the topic of a Learning Advisors' conference entitled *Integrating the teaching of academic discourse in the disciplines* (Chanock,1994). The view of integration in support of inclusive practice was explicitly addressed by several papers that dealt with aspects of discipline-specific work by advisors. Eight of the forty-nine papers presented included either 'collaboration' with subject teachers or an 'integrative' role played by advisors

within disciplines (Chanock, 1994, index).

ALL advisors formalising their professional identity: During the 1990s and into the 2000s, the ALL advisors worked towards formalising their professional identity (Berghout-Vanderwal, Hicks, McGowan & Carmichael, 1999). In 2002 a Conference held at Wollongong confidently proclaimed its title: *Changing Identities*. In her plenary address, *Language and academic skills advisors: Professional ontogenesis*, Carolyn Webb (2002) projected moves to consolidate the advisors as profession. The group adopted the collective name of ALL advisors, formed the Association of Academic Language and Learning (AALL), inaugurated the journal (JALL), a website https://www.aall.org.au/, and a bi-annual schedule of AALL conferences (Barthel et al., 2021). In 2005 Jeanette Stirling and Alisa Percy affirmed the Association's view of contemporary student support. In their model they declared that:

> the discourse (and language) of student deficit and remediation is not only disabling for the student, but anathema for more innovative forms of curricula development and learning support… Indeed, this model is already redundant for most, if not all, learning advisors (Stirling & Percy 2005 p. 180).

The ALL advisors continued to design ALD approaches that might be permanently integrated or embedded in disciplines, faculties or whole institutions. However, with some exceptions, their efforts at achieving integration and scalability have continued to meet barriers based on institutional factors beyond their control, among them misleading perceptions of academic language and learning.

2.1.3 To conclude mainstream integration of academic literacy:

In her 2015 volume of *Academic Literacy and Student Diversity*, Ursula Wingate provides a close analysis of differences between perspectives on the role of language

in learning held by learning advisors who draw on linguistic research, and the more broadly-based perceptions that guide higher education of the UK and other Anglophone countries. She highlights, as a misconception, the view that 'academic literacy is the same as language proficiency' (Wingate, 2015, p.11). Her view of academic literacy is 'the ability to communicate competently in an academic discourse community' (p. 6), and that this perspective introduces the need for inclusive practice:

> Once academic literacy is understood as communicative competence in an academic discourse community, the conclusion that *all* students have to gain this competence and will therefore benefit from support and instruction is obvious. (Wingate, 2015, p.11, original emphasis)

While conceding that additional English language support will be needed by some students, Wingate restates that basic language is a different issue and that academic literacy is an issue that affects all students.

To provide a research-based theoretical foundation for explaining practices for furthering tertiary students' ALD, section 2.2 of this chapter follows. It introduces three interrelated perspectives from **social constructivist theory** that will help in explaining the effect of mediated learning to be examined in relation to AALD in Chapter 3.

2.2 Social Constructivist Theory for Academic Literacy Development

To set a theoretical foundation for the work by Australian ALL advisors in the 1990s, the next section outlines three mutually supporting theories within a sociocultural paradigm on which the resistance to remediation and pursuit of curriculum integration of ALD relies.

Elements of each of the three theories of learning, by Vygotsky, Halliday, and Willison, are based on a social-constructivist paradigm. Each engages a perspective on *learning* as a process of communication for '*mediating', that is, guiding* students' learning within the discourse community of their subject of discipline:

- Lev Vygotsky's *Zone of Proximal Development* (ZPD) traces a novice's process of learning (within a field, or discipline) as mediated through communication with persons more advanced knowledge of the discipline.
- Michael Halliday's *Language Based Theory of Learning* (LBTL) is specifically focussed on the integral role of language in learning
- Willison's *Research Skill Development* (RSD) framework illustrates the phases of 'mediated' learning. These are visualised in a table as a cyclical progression from early phases of dependence on guidance, through to increasing independence and full autonomy, but including cyclical returns to requiring further guidance.

Together they form a useful framework for development of the tool and pedagogy for AALD – accelerating academic literacy development.

2.2.1 Social constructivist Theory: Three perspectives

Social constructivist perspectives on language and learning originated early in the twentieth century, based on the theoretical foundations laid by two major psychologists and educational reformers, *John Dewey* (1859-1952) in the USA, and *Lev Vygotsky (1896-1934)* in Russia.

In 1897, Dewey proclaimed at the beginning of his treatise, *My Pedagogic Creed*:

> I believe that all education proceeds by the participation of the individual in the social consciousness of the race. This process begins unconsciously almost at

> birth and is continually shaping the individual's powers […] Through this unconscious education the individual gradually comes to share in the intellectual and moral resources which humanity has succeeded in getting together (Dewey, 1897, p.19).

Dewey took the position that learning is supported *interactively* as learners communicate about their own activities with other members of the cultural community and, through the responses of others to their own activities, 'come to know what these mean in social terms'. For Dewey the predominant perspective is derived from psychology. The educator must connect with the learner's predisposition by engaging 'with some activity which the child is carrying on of his own initiative independent of the educator' (Dewey, 1897, p.20).

For Vygotsky it is the socio-historical perspective that predominates. Vygotsky, too, foregrounds activity for learning, but in his theory, the educator asserts some *control* as learners are guided on a path to independent knowledge, constructed by them individually, but within the context of the historically developed culture of their new 'community of practice'.

The active, *dialogic* nature of context-specific development of language – whereby a student's learning progresses with the help of an *expert*, the lecturer, tutor, or a more experienced peer – is another basic tenet of the work of Lev Vygotsky. This principle also underlies the work of Michael Halliday, and that of the current ongoing development of John Willison. For the current study, the theoretical foundation of curriculum-integrated pedagogies for ALD is founded on these three sociocultural conceptualisations: Vygotsky's ZPD, Halliday's LBTL, and John Willison's Models of

Engaged Learning and Teaching (MELT), derived from the RSD framework. Each of these three theoretical constructs contributes insights to the construction of a framework for AALD, the learning tool and pedagogy that are the basis of this case study.

(1) Vygotsky: Zone of Proximal Development: Vygotsky's concept of the ZPD and its associated focus on *mediation* adds a pedagogic concept that is relevant to the discussion of developmental structures for a learning curriculum. In an essay entitled *Interaction between learning and development*, and published posthumously in 1935, he defined the term as follows:

> (ZPD) is the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1935 /1978, p. 86).

The essential aspect of the ZPD and its application to tertiary learning development is that the *zone* encompasses the learner's ability to solve a discipline-specific problem while the process is being *mediated* by a person who may be more knowledgeable. In a higher education discipline this could be a discipline *expert* such as the course lecturer, or discussions with a more advanced fellow student, or with peers proposing ideas or raising questions. It could also occur as a mental dialogue with the authors of textbooks or (possibly) of research publications in the field. The ZPD defines the stage of *learning* where the student can begin to apply (for example) a new problem-solving concept with some guidance, while not yet able to use it independently for solving other problems:

> The zone of proximal development defines those functions that have not yet

> matured but are in the process of maturation, functions that will mature tomorrow, but are currently in an embryonic state. [….] By using this method, we can take account of not only the processes of maturation that have already been completed but also those processes that are currently in the state of formation (Vygotsky, 1935 /1978, pp. 86-87).

The ZPD encapsulates the process of *mediated* learning to the point where a learner progresses from superficial understanding to a deeper level of grasping the underlying principle or concept. In Vygotsky's terms, it is at this stage that the learner has gained the capacity to *develop* the new knowledge further and adapt it to dealing with different issues in different contexts. The pedagogical implications that may be deduced for coursework students' *academic literacy development* are, that expectations and opportunities would be built in for oral and written *activities*, listening and discussion, reading and writing, accompanied by a *scaffold* of guidance and feedback that could be gradually withdrawn.

While Vygotsky's Russian colleagues and his followers continued to develop his work, it was not until after the upheavals of World War II, that it came to the attention of Western educators. The American high-profile educationist, Jerome Bruner (1915-2016), was invited to write the introduction to the 1967 translation of Vygotsky's *Thought and Language,* where he elaborated on Vygotsky's conviction:

> ... that passing on knowledge is like passing on language – his basic belief that social transaction is the fundamental vehicle of education, and not, so to speak, solo performance. But alas, he did not live long enough to develop his ideas about the subject. I believe that it was his eventual hope to delineate the transactional nature of learning, particularly since for him [it] involved entry into a culture via induction by more skilled members (Bruner, 1985, p.25).

Bruner extrapolated that the underlying principles of interactivity and guidance were the essential features of student learning and thus 'at the heart of education [...] curriculum, learning, and teaching' (Bruner, 1985, p. 26).

In Michael Halliday's LBTL, language and learning are mutually indispensable. In John Willison's RSD-based MELT, the focus of student learning is on the attainment of learner autonomy in a cyclical **progression.**

(2) Michael Halliday: Language Based Theory of Learning: The linguist Michael Halliday (1925-2018), renowned as the originator of *Systemic Functional Linguistics* (SFL), developed and published the first edition of his *Introduction to Functional Grammar* in Great Britain in 1985. The second edition appeared in 1994 in Australia after his appointment as the inaugural Professor of Linguistics at the University of Sydney. What distinguishes Halliday's functional grammar from the rule-based tradition of classical grammar, is a focus on the 'whole text' and 'discourse', and on the *systems of choices* available to a language user in varying spoken and written contexts. This grammar became the foundation for the SFL movement, and it led Halliday to develop an elaborated series of theoretical concepts, as well as neat classroom textbooks, such as the Deakin University to *Language as a Social Semiotic* (Halliday and Hasan, 1985), and analyses of *Spoken and Written Language* (Halliday, 1985).

Of specific relevance to the current study is Halliday's 1993 LBTL. The theory is captured in three themes:

> All learning, whether learning *language,* learning *through* language, or learning *about* language, involves learning to understand things in more than one way. In a written culture, in which education is part of life, children learn to construe their experience in two complementary modes: the dynamic mode of the

> everyday common-sense grammar and the synoptic mode of the elaborated written grammar (Halliday, 1993, p.112)

This conceptual statement is particularly relevant to the present study for dealing with the issues experienced by undergraduate students in their ALD. In this context, *learning language* refers to 'mother tongue', or first language (L1) learning. It is achieved through interaction for the purpose of communicating with a parent or carer. The child's range of vocabulary, grammatical constructions and, eventually, abstract concepts (Halliday, 1993, p.97) grow through dialogic strategies of imitation and adjustment, as the carer responds by echoing and adding to the child's utterances. The languages of academic disciplines are typically a written discourse, constructed by experts, or mature members of their discipline when in communication with each other by research publications or in conferences and presentations. In their conversations with one another, principally by reading, writing, and publishing research papers, academics continue to share and build new knowledge.

Learning through language refers to the construction of knowledge through the medium of language. In this language-based theory of learning, Halliday posits written language as a 'second order' language (Halliday, 1993, p.109). This implies that learning the written language of one's mother tongue is a process akin to second language learning. From the perspective of learning a second language by interacting with 'speakers' of that language, academics would principally rely on engaging in a silent, asynchronous *dialogue* with the authors of written texts. Their academic language learning therefore occurs through reading-for-writing and proceeds on two levels. First, by reading, and construing their own versions of the author's meaning, they appropriate the language of their readings; and secondly by imitating, and re-using the language conventions of their readings, learners become *peripheral* members of the 'knowledge

community' of their discipline (Lave & Wenger, 1991, Northedge, 2003a).

Learning about language, the third element, provides for linguistic insights that afford a deeper understanding and support the learner's growing capacity for autonomously applying the underlying logic of the context-specific language conventions to learning practices in varying contexts, be they different academic disciplines, places of employment, or other formal or informal social communities.

With this Theory, Halliday's proposal was:

> to establish two unifying principles: that we should recognize not only a *developmental continuity* right through from birth to adult life, with language in home, neighbourhood, primary school, secondary school, and place of work, but also a *structural continuity* running through all components and processes of learning. The expression 'learning through language' was designed to bring out this structural continuity and to locate it with respect to those contexts where the learning is actually focussed on language (Halliday, 1993 p.113, highlighting added).

While Halliday's perspective on the role of language in learning is grounded in linguistics, and that of Vygotsky in psychology, their theories both overlap and complement each other. Vygotsky's emphasis is on connecting the learner with the community's social and historical knowledge, while Halliday's focus is foremost on learners engaging with the knowledge of a community through its language and in its social and cultural context. This context is two-fold, encompassing both the broadly conceived 'context of culture' and the community-specific context of 'situation' (Halliday, 1985a, pp.45-47).

The common sociocultural ground, which Halliday and Vygotsky also share with John

Dewey, is the aspect of learning as discovery, which is mediated through the interaction with other persons. However, for Dewey the initial focus is on the learner's personal motivation, with the teacher's role as facilitating discovery, and learners following their own innate interest (Glassman, 2001, p12). In contrast, rather than leaving the learner's discovery of existing knowledge entirely to chance, Vygotsky views the role of the teacher as mentor, with a somewhat controlling role for guiding the learner to discover the historically and culturally developed knowledge of a social community (Glassman, 2001). In Halliday's LBTL, language and learning are mutually indispensable: language is viewed as a constituent of learning, and, at different stages of their development, learners may progress from gaining knowledge that is general knowledge to more specialised discipline knowledge of the social community, and eventually, as a fully-fledged researcher to the creation of knowledge that has previously been 'totally unknown' (Willison & O'Regan, 2007).

(3) John Willison: Research Skill Development: In 2006 John Willison and Kerry O'Regan devised the foundational Research Skill Development framework (RSD 2006/2019). The concept of 'research' in 'RSD' connotes active, language-rich processes of discovery, and this has enabled teachers and researchers dealing with all levels of learners, from childhood to postgraduate researchers, to adapt the RSD framework to their learners' needs. The RSD framework demonstrates how six *facets* of research combine to guide the process of cumulatively learning the skills of researching, by which students: (1) embark on inquiry, (2) find information/generate data, (3) evaluate information/data and the research process, (4) organize information/data and manage the research process, (5) analyse, synthesise and apply new understandings, and (6) communicate knowledge with an awareness of ethical, social and cultural issues (Willison 2012; 2018).

The framework is set out as a grid where each facet is elaborated in terms of the learner's stages of autonomy (RSD 2006/2019). These are expressed, both in words and in colour, as the stages of a learner's dependence on guidance, from prescribed research at the first stage (coloured red), supported by 'highly structured directions and modelling from educator prompt researching', to scaffolded research at the third stage (yellow), and to open-ended and unbounded research at the fourth and fifth stages (green and blue respectively). The stages represents levels of autonomy, from being able to 'initiate research - guided by the educator' to the levels where learners 'determine guidelines for researching that are in accord with discipline or context' Willison, 2020, p.32, Table 2.1; Willison & O'Regan, 2007).

The RSD is found to be highly adaptable, and Willison has welcomed modifications, actively sought feedback and critiques, and modified the framework over the past 15 years since its inception (Willison, 2018). The original purpose of the RSD framework was to address 'the need for explicit and coherent research skill development in school and university education' (Willison, 2018, Willison & O'Regan, 2007). The account of the RSD's broad range of applications provides evidence to support the concept that all *learning* be viewed as a stage somewhere on a continuum of *researching*, and with *learning* support somewhere on the cycle of *autonomy*. The explicit fusion of research-skill-development and learning-skill-development of the original RSD (Willison & O'Regan, 2007) led to Willison's unifying concept of *Models of Engaged Learning and Teaching* (MELT) (Willison 2018, 2020).

Models of Engaged Learning and Teaching that are of relevance to literacy development among a collection of new frameworks adapted from the RSD for tertiary pedagogy are frameworks for *Work Skill Development* (WSD) (Bandaranaike and Willison, 2009), *Digital Skill Development* (DSD) (Torres et al., 2018, Torres &

Yazbeck, 2021), and the *Academic Literacy Development* (ALD) *Pentagon* (McGowan, 2018).

In summary, taken together: The work of the three mutually supporting theoretical constructs ZPD, LBTL, and RSD represent a mutually confirming pattern of facilitation for the learning and development of academic literacies by active *learning* that is *mediated*, language that is *contextualised*, and *guidance* that targets *learner autonomy*. In particular, in these three conceptualisations, the students' learning is guided by the lecturers' choices of assignment and the associated learning activities, assessment, and feedback that are integral to the requirements of the *context* of their course curriculum.

Together, the theoretical constructs of the ZPD, the LBTL, and the RSD framework provide an overlapping, perspective on language, learning, and researching that illuminates the processes by which learners may be empowered to accelerate their own ALD:

> ***Learning* is perceived as mediated through interaction** from early childhood, through school and tertiary learning and into the workplace, and as drawing on 'historically documented knowledge'.
>
> ***Language* is viewed as a constituent of learning**, whereby individual learners construct their own knowledge, critically examining 'culturally created knowledge' and interpreting it within the context of their own experience (Halliday)
>
> ***Learner autonomy* is achieved in a cyclic progression**, with learners communicating and applying their understanding at increasingly sophisticated levels (Willison).

The work of the complementary constructs of 'learning', 'language', and 'learner autonomy' thus provides a conceptual foundation for the learning and teaching of

Accelerating Academic Literacy Development.

2.2.2 Complementary concepts for higher education pedagogy.

For the application of learning theories in higher education, several have practical implementations within the socio-cultural paradigm that have been elaborated as pedagogic concepts. Prominent among these for the current case study are the concepts of *Surface & deep learning* (Marton & Säljö, 1976); *Threshold concepts* (Meyer & Land, 2005); *Situated learning: Legitimate peripheral participation* and the idea of *Communities of Practice* (Lave and Wenger, 1991), and *Experiential Learning* (Kolb, 1981; Kolb & Kolb, 2005). Two further concepts, popularised in pedagogic research contexts, are *scaffolding* and *undergraduate research*.

The metaphor of *scaffolding*, which is generally applied to Vygotsky's *mediation* of learning, first appeared in a publication by Wood, Bruner, and Ross (1976) and tends to be credited to Bruner. The thrust of 'undergraduate research' was initiated by the Boyer Commission (1998) Manifesto: *Reinventing undergraduate education. A blueprint for America's research universities*. The Manifesto's publication was enthusiastically received and spawned many state-based centres, modelled on the US-based CUR: Council on Undergraduate Research (n.d.) which had been founded in the 1970s; the ACUR: Australasian Council for Undergraduate Research (n.d.) and a number of Reinvention Centres of Excellence in the UK. Activities from these initiatives include membership, newsletters, and annual conferences for undergraduate students to present their research.

2.3 Academic literacy in terms of research integrity

The AALD framework for accelerating learning and teaching was constructed as a pedagogy for dealing with issues for academic language and learning that presented

barriers to curriculum-integrated academic literacy learning and development. As outlined at the start of this review, the aim of integrating ALD into mainstream curricula of Australian universities has been promoted by ALL advisors throughout four decades of Australian higher education. (Taylor, 1978; Chanock, 1994; 2011; 2017; Arkoudis 2005; 2014; Barthel, 2021). In line with Gordon Taylor's concept, the Academic Skills Advisors of Australian universities rejected remediation as the only approach to the learning and teaching of the literacies of their Disciplines from the early 1990s, when Kate Chanock coordinated the conference *Integrating the teaching of academic discourse in the disciplines* at La Trobe University (Chanock, 1994). The formation of the Association for Academic Language and Learning (AALL), its Journal (JALL), conferences, and website have provided opportunities for sharing, as has the Wollongong based University Teaching and Learning Practice (JUTLP). However, barriers to the widespread acceptance of academic literacy integration persist, despite many examples of effective approaches, and despite a tacit understanding by discipline academics of the crucial role that academic literacy plays in the learning and development of discipline content of higher learning.

2.3.1 Issues as Barriers for Academic Language and Learning

The first issue concerns students' English language proficiency at university entrance levels. Unlike the higher education colleges and universities of the United States, where there is a long, continuing tradition of teaching English to speakers of other languages (TESOL), the development of English language proficiency in Australian and UK tertiary education has been variable, relying largely on remedial support for students whose command of English is deemed to be deficient. The discourse of deficiency and remediation has long been rejected both by leading researchers and ALL practitioners (Turner, 2010; Chanock, 2011; Wingate, 2015).

From a sociocultural perspective on learning, the expectation that students take responsibility for their post-entrance English language development suggests that students need both motivation and opportunities. As students would generally not be intrinsically motivated to engage with language, they would usually need the extrinsic motivation (Ryan & Deci, 2000) of knowing that their purposeful engagement with fostering their own academic literacy development was valued by their subject lecturers and the institution. The classic method of communicating institutional values of specific facets of learning is by their inclusion in the subject's assessment criteria. This would require discipline-based expectations about language use to be articulated within the context of discipline content. Learners would also need to receive the support of feedback on their written assignments, and on the progress of their academic literacy development against pre-set expectations.

The second issue concerns academic literacy which is misunderstood in surface level terms as no more than a basic grasp of English vocabulary and the ability to use grammatically correct sentence structures in spoken English, with the addition of correct spelling, punctuation, and citation practices for academic writing (Wingate, 2015). It is an issue of concern as it ignores two fundamental characteristics of academic literacy, firstly that practices in writing and citing conventions can vary considerably in different academic contexts across the disciplines, and secondly, that an understanding of writing-from-sources provides the underlying reasons for citation practices within the tertiary research-oriented context of higher learning.

This insight raises the third issue, the perspective of academic integrity as a matter of a learner's personal character and ethical behaviour which underpins the general discourse on the prevention of plagiarism, cheating and fraud, and which has dominated the research literature on students' academic writing for the three decades

since the early 1990s. From perspective of academics, a-serious stumbling block for students was found when their learning criteria failed to direct attention to research-based reasons for incorporating source material, and when learners therefore feared, incongruously, to admit the source texts consulted for writing their assignments. In this light, the persistent foregrounding of avoiding plagiarism by the use of paraphrasing may be seen as misdirected attempts to help students avoid plagiarism. It can be seen as a consequence of the learners' misconception of the notion of originality in academic writing. It is also seen as a failure to assist learners to learn from models of successful approaches to source usage in by texts by expert writers.

Issues summary: Conflicting understandings identified under the three issues of English language proficiency, academic literacy, and academic integrity, are found in the research literature to be responsible for the unhelpful determinations of remediation as the fall-back position for dealing with these issues. Indications were that surface level, rather than deep level approaches to language, literacy and integrity were likely contributing factors to barriers to the integration of academic literacy into mainstream subjects.

I therefore argue that the three issues of academic language, literacy and integrity are deeply interdependent and need to be approached with each being considered in relation to the other two. It is a failure that appears to be occasioned by a preoccupation with the complexity of preventing, detecting and dealing with student plagiarism and other forms of cheating that tends to overshadow the available research on reading-for-writing, and writing-from sources. It may also be a failure of well researched and designed projects for mainstream integration of ALD embedding to account for of scalability

A way forward in both conceptual and practical terms was identified in Australia, dating

back to 1978 with Gordon Taylor's call for institutional conditions that would encourage discipline lecturers to seek the cooperation of language specialists, to serve the need for all neophyte learners alike. This call has been echoed in findings by researchers for four decades, and many approaches have been constructed, developed, trialled, and in some cases maintained for some years, but within limited parameters. It is the subject for discussion of possibilities afforded by the AALD tool and pedagogy in the next section. I argue that academic literacy practitioners and researchers from Anglophone universities worldwide have provided a wealth evidence in support of recognition of the value of mediating undergraduate learners' induction into the process research writing.

2.3.2 Academic integrity as research integrity: writing-from-sources.

The case against remediation, and for the integration or embedding of academic literacy within disciplines was therefore pursued actively by Australian ALL Advisors from their earliest appointments in 1990s (Chanock, 1994). The early 2000s began over a decade when academic literacy projects were encouraged under Government funded schemes administered. They began with the *Carrick Institute*, followed by the Australian Learning and Teaching Council (ALTC) and replaced by the Office for Learning and Teaching (OLT). The time since 2010 has seen a surge of publications on curriculum integration, or embedding of ALD into core curricula (Arkoudis, 2014; Chanock, Horton, Reedman, & Stephenson, 2012; Dunworth, Drury, Kralik, & Moore, 2014; Hunter & Tse, 2013a, 2013b; Maldoni, 2017, and more). Nevertheless, while many opportunities were found and implemented by the ALL Advisors, and researchers, the overall policies have in general maintained the discourse of deficit and remediation.

Many researchers have strenuously opposed the inclusion of students' textual plagiarism in the same punitive policies as deceptive and fraudulent behaviours (Horacek, 2009; Chanock, 2001; Li & Casanave, 2012; Howard et al., 2010; Wingate,

2015). Misconceptions of academic literacy appear to explain why curricula and teaching approaches may fail to draw attention to the learning of discipline specific research writing conventions. Broadly speaking, in the Australian tertiary sector, the role of writing-from-sources as central to academic writing practices was often taken as a given, while the learning and assessment focus for students concentrated on the mechanics of citing and referencing sources (Jones & Freeman, 2003; Ireland & English, 2011; East, 2016).

The strategy of writing-from-sources is understood in the research literature as fundamental to research writing. It is a process that positions learners as interacting with the authors of published research papers. This interaction is the essential element in Vygotsky's concept of mediated learning in the ZPD, as well as Halliday's learning through language. The process of mediated learning is explained by Vygotsky (1935/1978), in terms of the ZPD, as guidance occurring in conversation with another, more experienced person. The practice of writing-from-sources shifts that conversation from the synchronous, person-to-person encounter to an a-synchronous, cognitive one between the reader and the author of an article or other text.

As novice learners are inexpert writers within their new discipline, their approaches to understanding the discourse may begin by simply re-telling information in different sets of words, a process promoted to students as 'paraphrasing', or even in Howard's (1993) concept of 'patchwriting'. However, with growing expertise, learners may also, in their own writing, respond and add to, or challenge the views expressed in the paper, thereby contributing new perspectives and constructing new knowledge of their own. In terminology coined by Scardamalia and Bereiter (1991), the first step, (paraphrasing or patchwriting) is captured as 'knowledge telling', and the second, (responding, challenging, or adding to the source information) as 'knowledge transforming'. The two

steps were proposed by Rebecca Moore Howard (1999) as a continuum of two stages of learning. It has recently been re-stated more assertively, in the United States, by Howard and Jamieson (2021), in a paper with the title: *The Ethics of Teaching Rhetorical Intertextuality.* This paper clearly indicates an ethical responsibility in the remit of tertiary 'rhetoric' (i.e. teaching) of writing from sources (also labelled 'intertextuality). As an ethical responsibility is the explicit requirement from all 'fully-fledged' researchers, the implication is that the 'language' of tertiary learning, as a prolonged induction into thinking, reading and writing as researchers.

The Boyer Commission's (1998) Manifesto *Re-inventing undergraduate education* was the touchstone for my own articulation of research as the pedagogic reason for undergraduate writing requirements that was implied in the plagiarism policies of Australian universities, while it was not generally being explicitly identified in curriculum documents nor in course outlines nor in objectives for learning outcomes. The Boyer Commission, and the undergraduate research movements, propelled by conferences on in the US by on undergraduate research (CUR since the 1970s and NCUR National Conference on Undergraduate Research (since 1985), in the UK (BCUR, since 2010) and Australia (ACUR, since 2012) and publications (Brew, 2013). However, while the thrust of this movement has concentrated on research projects for undergraduate students, the concept of all undergraduates' learning as stages of researching has tended to be to be underplayed or rejected in the promotion of learners' undergraduate research projects.

In Australia, the academic language gap in the undergraduate research movement has been bridged by the publication of the Research Skill Development (RSD) framework, In a matrix format, the RSD and its successive evolutions have described the core elements of research skill development in terms of six interdependent, yet mutually

inclusive research facets. These are described along a continuum of increasing levels of a learner's autonomy. The RSD framework resonates with my early conceptualisation of a 'Plagiarism framework' (see McGowan, 2008, p. 101) as method for pre-empting plagiarism that is unintentional. It demonstrates through increasing levels of recognition, the stages of a learner's understanding and development of the use of readings as models for evidence-based academic writing.

To conclude, this review examined academic literacy in terms of research integrity. The aim of achieving the integrity of researching places undergraduate learning firmly on a research continuum of learning increasing levels of rigour.

Chapter 3: Explaining the AALD Framework

Introduction

The review of the literature of current theories and practices of academic literacy development (ALD) has highlighted undesirable consequences for undergraduate students' learning if they failed to become proficient in discipline-specific academic literacies. Remedial provisions that were 'bolt-on' activities, accessed by referral or by students at their own initiative, tended to be short term remedies for immediate problems.

Persistent calls for the integration of discipline-specific academic literacy into assessed discipline curricula have been based on a view of language as an integral constituent of knowledge building (Chanock, 2017). For this reason, discipline lecturers themselves are considered to be best placed to induct students into the written language of their disciplines (Arkoudis, 2014; Wingate 2015).

Chapter 2 was clear, however, that abiding barriers to the integration of ALD into content learning and teaching persist. In the first instance, there is continued resistance to the very idea of teaching academic language, and in cases of successful integration, there is generally silence on examples of their sustainability or their scalability across the Faculty or the University.

How to overcome initial barriers for discipline academics to accept ALD in mainstream curricula as fundamental to higher learning is the basic objective of the present research. The study investigated outcomes of my collaboration with a discipline

specialist, to integrate a conceptual self-help tool for accelerating academic literacy development (AALD) which was previously developed and used with small groups of students.

The purpose of this chapter is twofold. The first one is to give a detailed account of the teaching practice for integrating the conceptual self-help tool of genre analysis of harvesting language for AALD. The second purpose is to explain the effects of learner and teacher autonomy on the continuing viability of the curriculum integration. I will argue for autonomy as the missing link for the acceptance and proliferation of well-conceived projects of curriculum-integrated ALD.

The chapter is structured as follows:

- Section 3.1 begins with an account of the **context** in which the AALD framework as a conceptual self-help tool for learners became the medium for the collaborative construction of a curriculum-integrated pedagogy.
- Section 3.2 then demonstrates how the AALD framework informs a teaching practice of *genre analysis* for 'harvesting language' and re-using the harvested language for learning and developing the skills for their own source-based writing.
- Section 3.3 draws on the framework for Research Skill Development (www.rsd.edu.au) to visualise how the tool and pedagogy for ALD function to support the development of learner and teacher autonomy.
- Section 3.4 rounds off with a summary of the characteristics of the AALD framework and **raises** the possibility that learner and teacher **autonomy** may be a missing element that holds a crucial role in sustainably embedding ALD into mainstream learning and teaching.

3.1 Context for the adoption of an AALD pedagogy

Because of my explicit personal involvement in the curriculum design and co-teaching that are the subject this study, this section begins with an auto-ethnographic account (Holman Jones, 2005), and a summary of my personal background that prompted the construction of the framework for 'accelerating academic literacy development'.

3.1.1 Author's background

I made my decision for this research study in the year leading up to my retirement. I was keen to investigate the viability of a key outcome of my teaching practices and scholarly engagement with the advancement of students' academic language and learning development at my Australian research-intensive University. During the last two decades of my career, I combined experiences and insights gained from my successive roles as an Academic Language and Learning (ALL) professional during the 1990s; and as an Academic Staff Developer (ASD) from the early 2000s.

In 1991 I was appointed at this Australian South Coast University (ASCU) as advisor in ESL (English as a Second Language), initially for the support of international students. I brought to the position a range of qualifications and experiences in language learning and teaching. They included a decade as lecturer in German, and a further decade as ESL teacher and advisor in South Australian primary schools, and in working with refugees in the Australian Government's Adult Migrant Education Program (AMEP).

I am bilingual, with German as my mother tongue. The first four years of my own schooling had been in Germany. I began to learn English on arrival in Australia at the age of 11. At the time of my family's migration there were no special support systems in place for immigrant school children. My own English learning and development therefore occurred solely by immersion in the Australian school system. This

experience has been influential in my conceptualisation and as teacher of 'the other tongue' (Hasan, 1994) and in the practical application of the AALD tool as a self-help approach for accelerating academic literacy development for learners.

3.1.2 Context for this Case Study

My university's ALL service was instituted in 1991 and integrated with the then already existing advisory centre's ASD) function. Both services, for staff and for students, were provided university-wide from this augmented academic development centre.

The context of this work environment was propitious for the forging of links between the learning and teaching development strategies for both academics and students. It opened scope for addressing issues such as the interdependence of academic literacy, research skill development, learner autonomy, academic integrity, and plagiarism problems simultaneously from the learner and teacher perspectives.

During my time as an ALL advisor in the 1990s, I identified not only a connection between the occurrence of inadvertent, text-based plagiarism among some non-native English speakers (NNES) and their sometimes low levels of English language skills, but found that many of the local native English speakers (NES) consulted ALL staff for help in avoiding plagiarism as well.

Confusion by both native and non-native English speakers about plagiarism was evident in the framing of their questions about the percentage of copied text considered to be acceptable in results of text-matching of their assignments (using Turnitin.com). Students were also confused by the complexity and variety of referencing systems. A particular problem for some novice undergraduates was the experience of fear of the consequences of inadvertently 'committing' plagiarism through inappropriate use of

readily available internet resources. For others it was the frustration of sensing that academics were failing to teach them ‘properly’, as expressed by the survey student quoted at the beginning of this study (Bretag et al., 2014).

These observations were indicators for me that crucial messages on conditions for effective learning**,** such as a safe environment for ‘active learning’, **‘**taking risks’ and ‘learning from mistakes’ were being drowned in the growing anxieties around the need for tracking down cheating behaviours that were facilitated by internet plagiarism. Many students’ concerns centred on avoiding the pitfalls of ‘inadvertent’ plagiarism, with mastery of the technicalities of citing and referencing as their only solution. To counter this, some learners were supported in advisory centres where ‘paraphrasing’ was sometimes promoted as a literal interpretation of plagiarism policies that warn against ‘using the words of others’. However, while simply reiterating source text by paraphrasing may be an initial strategy for newcomers to make sense of a text, when applied mindlessly, without language awareness, reliance on paraphrasing has spawned farcical practices culminating in the use of computer-based word-for-word substitution that result in production of incomprehensible texts (e.g Rogerson & McCarthy, 2017).

I found there was a general lack of awareness among both NES and NNES learners, that the use of citing and referencing conventions was not merely required to prevent student cheating, but that writing-from-sources served crucial academic purposes. These include, for example, the learner’s broadening engagement with existing knowledge of their discipline, and the scaffolding of their own knowledge building, mediated by the authors of discipline-specific research articles (Hirvela & Du, 2013; Pecorari 2012). In addition, there was a lack of familiarity with the written genres of research, and in particular, the research genres of the disciplines they were studying. I

also found that academics, while being themselves aware of the academic purpose of citing source texts in their own academic writing, did not generally make this understanding explicit for their students (East, 2005).

3.1.3 Personal learning experience of 'harvesting language'

While working with individual students, and in workshops, as an ALL advisor in the 1990s, I explored the notion of 'harvesting language' - which replicates *consciously* what mature readers of academic literature will do *unconsciously***,** that is, storing the grammatical language chunks that typically appear in their readings, and re-using these when writing about their own content - from examples of academic papers published by the experts of their disciplines. This was a strategy designed to provoke students' active engagement, and for clearing the way to becoming self-directed learners.

The idea may have emerged from memories of my own mixture of unselfconscious and deliberate learning of English as an eleven-year-old, in a way that is similar to accounts of first language or 'mother tongue' learning as an infant (e.g. Halliday, 1993; Hasan, 1994). As an eleven-year-old I learnt English, both in the classroom and in the playground, because of a need to communicate. Spoken language developed through many sequences of trial and error, from listening and observing the context and actions of teachers and school pals, through imitating the sounds that seemed to make sense, to gradually gaining competence in spoken English. The process seemed to occur largely unselfconsciously as a range of 'social-semiotic' or 'meaning-making' processes (Halliday,1985a).

My written English language, however, developed more obviously as a combination of both unselfconscious and deliberate learning, as described by Halliday (1985) in *Spoken and Written Language.* Some of the literacy aspects of written language that I

had already developed in the German language were transferable to English and were augmented intuitively by whatever reading was accessible. However, understanding English in terms of the grammatical structures, phraseology, and the conventions for structuring written texts appropriately for different semiotic contexts required more targeted and continuing efforts. My strategies of deliberately 'appropriating' phrases and discourse structures (East, 2005), and re-using them in writing essays, became internalised during my high school and university studies.

Subsequent to my employment as an ALL adviser, as an ASD in the 2000s I used the concept of harvesting language not only as a practical approach for enabling students to augment their stock of vocabulary, grammatical phrases, and discourse patterns, but also as a method for raising language awareness among lecturing staff (McGowan, 2003; 2005a; 2005b; 2008). I drew these activities together in a conference paper entitled 'Redefining academic teaching practice in terms of research apprenticeship' (McGowan, 2010). I also constructed a 'Plagiarism Framework' which was designed for guiding discussions with academics about articulating their existing, but sometimes tacit, understanding of the role of citations practices as supporting evidence in the writing of their research papers (Appendix A1.5; McGowan, 2008, p.101). This also opened a perspective on reasons why citation practices are viewed an integral aspect of learners' ALD across the disciplines and throughout their years of study.

3.1.4 Reading as modelling academic writing

I wanted to draw attention to the need for students to be expressly inducted into the concept of undergraduate writing as research writing (Haggis 2006). Academic reading was understood to be fundamental to academic writing, and there is a growing body of literature on the role of reading for writing (Fujimoto et al., 2011; Grabe & Zhang, 2013; Horning & Kraemer, 2013) and a growing interest in writing from sources (Abbott, 2013;

Hamilton, 2018; Hirvela & Du, 2013; Howard, Serviss, and Rodrique, 2010; Jamieson, 2013; Li & Casanave 2012). However, while that interest is widely found in the research on L2 writing (Grabe & Zhang, 2013; Pecorari, 2015), I found little evidence of the use of a strategy of reading for writing, and more specifically, of writing from sources, among the teaching academic staff who attended the ASD courses.

An understanding of the role of reading was the key for modelling academic writing and incorporating source texts appropriately, without plagiarising (Horning, 2013; Lirardét & Black, 2016). However, I found that the discourse of textbooks or lecture notes was generally limited to pedagogic genres, with 'teacherly' inflections, and often without the rigour of the academic citing conventions that are required in undergraduate essay or report-style genres submitted for assessment.

Source-based writing: The AALD framework was therefore designed for inducting learners into the realm of *source-based* writing, with the aim of achieving learner autonomy. These objectives meant mediating their first steps into writing within the parameters of *research genres* found in published research-based publications of their discipline. However, while articles from academic journals were an appropriate source of models of academic writing, published research papers in their entirety are complex. Certain sections of some papers, such as methodology, or data analysis and findings, are likely 'irrelevant' for undergraduate learners (Wingate 2015 p.8). Nevertheless, for learning resource-based writing, certain aspects of authentic discipline-specific research papers, when mediated as part of undergraduate induction into ALD, would be a useful field for extracting, or 'harvesting' language. The 'language' in this context concerns not only discipline-specific technical terms, but also the phrases, sentence patterns and overall discourse structures and conventions of referencing that typically occur in the research writings of their current discipline.

I argue that, as well as harvesting conventions of language and discourse structure for application in assignment writing, a guided entry into reading at least the structurally relevant part of academic articles could also provide learners with insights into underlying principles of writing-from-sources. Some learners mistakenly interpret their universities' academic integrity policy requirement to use 'their own words', or to be 'original' as goals of writing. This may be responsible for learners using ways of hiding rather than highlighting the origin of source texts. The modelling of experts' citation of source texts that demonstrates how learners *build their own discipline knowledge* should, in time, help them to understand the underlying principles of citation practices.

Against this background, section 3.2 introduces the TLC, a Teaching-Learning Cycle, (Rothery 1994) and explains how this was employed in the AALD workshops for teaching *genre analysis* as a tool for learners, and a pedagogy for teachers.

3.2 Introducing an AALD-based teaching practice

The three-stage Teaching-Learning Cycle (Figure 3.1) was designed and implemented in Australia by Joan Rothery for the *Disadvantaged Schools Program* of New South Wales (Rothery, 1994; Rose & Martin, 2012, p.66).

The TLC is based on principles of Systemic Functional Linguistics (SFL). Following its successful implementation in the school system, the TLC has since been applied at all levels of learning within primary, secondary and tertiary education (Rose and Martin, 2012). In the current context of AALD, the TLC is used by the teacher for introducing learners to a basic version of *genre analysis* of academic texts that are suitable for learners to use as models for 'harvesting language' to be re-used in their written assignments.

Background: In 2011, three years before the start of this study, I devised the AALD pedagogy of genre analysis for the collaborative teaching with the first lecturer (code-named STEM Lecturer-1) at the centre of this study (see Appendix A-1 for the timeline of this study). In our initial collaborative planning of the AALD pedagogy, SL-1 made four one-hour time slots available from her mainstream STEM course, as dedicated AALD workshop times. The sessions were spaced at about two weeks apart, to allow for sufficient time for each of the three cycles to be completed.

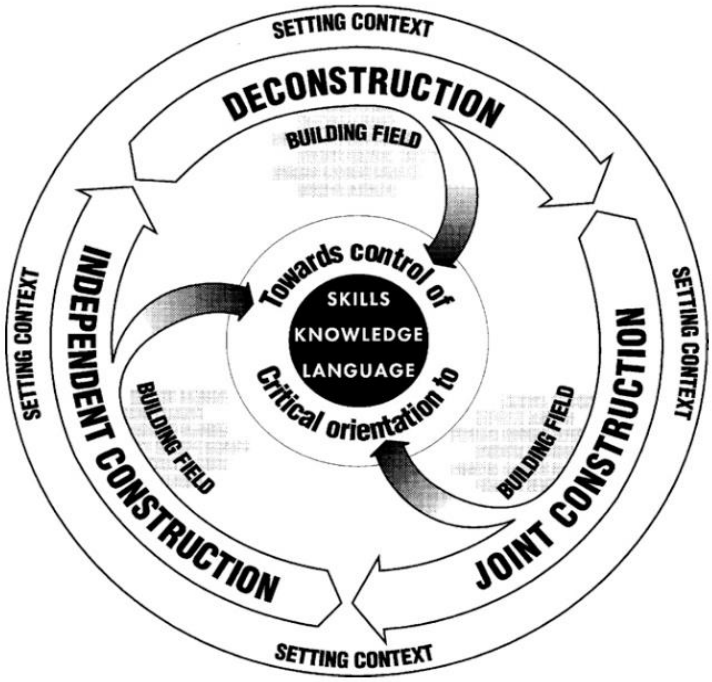

Figure 3.1. The Teaching-Learning Cycle (TLC). (Joan Rothery, 1994)
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3.2.1 Teaching-Learning Cycle: Teaching practice and learning tool

The basis of the TLC teaching practice is to engage learners in analysing discipline-specific research papers for examples of 'language' that could be applied in the writing

of an assignment. In the context of AALD, this analysis takes place in the following three parts.

- *De-construction:* The first part consists of a classroom demonstration of genre analysis for 'harvesting re-usable language' (such as new words, phrases, or structures of sentences, paragraphs or an entire article) from model text.
- *Joint construction:* The second part of the cycle consists of workshop activities of jointly practising the re-use of 'harvested language' items by applying them into other possible contexts.
- *Individual construction:* The third part is for all individual learners to apply the harvesting processes that were demonstrated, and jointly practised, to structure their own assessable assignment. This was given as a small homework task.

The amount of time needed to complete each cycle is made up of the one-hour workshop and the time a learner spends in following up on the optional homework task and submitting it in time for receiving feedback. Learners who availed themselves of this optional opportunity received an optimum amount of mentoring in this process.

To illustrate how the cycle functioned, I draw on the initial collaborative implementation of the AALD in 2011. The first of the four session times was reserved for introductory information and activities. At this stage the class was given the title of their assignment which was limited to the content of the first four weeks of the course. The objective was to help students engage with and consolidate the foundational information before exposure to the more complex parts of the course in the second half of the semester.

Sessions 2, 3, and 4 were designated workshops, devoted to the application of the TLC. I describe them here as the first implementation of the collaborative teaching approach, when I, as the advisor, took the lead, while SL-1 intermittently provided

additional, discipline-specific information for the students. The teaching sequence was to follow the same pattern of *deconstruction*, *joint construction*, and *individual construction* for each of the three substantive workshop sessions.

- Workshop session 1: introduction only
- Workshop session 2: structure of the overall paper
- Workshop session 3: structure of an introductory paragraph
- Workshop session 4: words, groups, sentences, citing conventions

In workshop-2 the analysis of the overall structure was explained by reference to a traditional science research genre, by using (with attribution) examples of the structural stages demonstrated in the textbook on writing experimental research reports by Weissberg & Buker (1990).

The first cycle of genre analysis was used to deconstruct a research article published by Hamlin et al., (1996) as a model for the structure of the assignment task. The content of this article was directly relevant to the subject content of the assignment. The overall structure of the model article was identified simply by extracting all heading and subheadings. (Appendix 1,2a)

In workshop-3 the analysis was performed on the same article (Hamlin et al., 1996), but this time the goal was the the structure of the introductory paragraph. (Appendix A1.3c)

In workshop-4 the analysis used a second article handout (Ajdukiewicz, et al., 2010). Its subject matter was also relevant to specific assignment topic. (Appendix A1.4b). The goal this time was to harvest words, phrases sentence structures that were in common use and could be re-used by students in their written assignment. To be safe from inadvertent plagiarism students needed to proactise ways of ensuring that the

harvested items were ‘content free’ and in common use. This required learning a strategy of identifying and blocking out items that were ‘content words’, as well as discussion on potential risks and safeguards.

From Appendix A1.4a: Points for discussion:

- It may not be safe to take an entire sentence of your essay or report. Why not?
- Alternatively, it may sound clumsy.
- For example, split “has experienced” from “the integration of” and re-use in separate contexts
- Try re-using individual words or word sequences in different parts of your essay.

In summary, the three sequences of guided learning through application of the TLC provides learners with the opportunities for recognising, rehearsing, and applying the strategies of harvesting the language of models of writing practices that are central to research writing of their discipline.

Section 3.3 as follows draws on the RSD framework to discuss the centrality of language in learning, as visualised in the image of the AALD pentagon, and by a visualisation of the learner autonomy loop, it demonstrates the learning progress as a spiralling pathway, for both learners and teacher, from initial dependence on guidance to increasing independence to full autonomy**.**

3.3 Two theoretical perspectives

The RSD framework (Table 3.1) is the ‘prototypical’ example of Willison’s *Models of Engaged Learning and Teaching* (MELT) and the conceptual framework for theoretical perspectives on two concepts central to this study:

1. The *centrality of language for learning*, represented by the vertical axis of the

RSD framework

2. The *cyclical progression of mediated learner autonomy*, represented by the horizontal axis.

The RSD's vertical axis lists the six basic steps taken in the process of academic writing. The horizontal axis indicates the learner's progress from the initial stage of dependence of direction, through dependence on guidance, towards capacity as an autonomous researcher.

The stages of learner autonomy are therefore demonstrated to be stages of learning. For this reason the RSD model has been applied in a variety of models of learning, from early childhood though schooling, tertiary study and into the workplace. Models of learning constructed on the RSD are collectively called MELT (Willison 2020).

Importantly for the AALD model, the facet Communicate and Apply explicitly addresses increasing language awareness, mastery of the language within specific genres, and application to 'diverse contexts' (Table 3.1).

Research Skill Development Framework

For educators to facilitate the explicit, coherent, incremental and cyclic development of the skills associated with researching, problem solving, critical thinking and clinical reasoning.

www.rsd.edu.au
john.willison@adelaide.edu.au

Creative Commons 4.0

Scope for Student Autonomy

Facets of Research		Prescribed Research	Bounded Research	Scaffolded Research	Open-ended Research	Unbounded Research
Students develop research mindedness when they…		Highly structured directions and modelling from educator prompt researching, in which…	Boundaries set by and limited directions from educator channel researching, in which…	Scaffolds placed by educator shape independent researching, in which…	Students initiate research and this is guided by the educator.	Students determine guidelines for researching that are in accord with discipline or context.
Embark & Clarify *What is our purpose?* Students respond to or initiate direction, clarify and consider ethical, cultural, social and team (ECST) issues.	Curious	Students respond to questions/tasks that are directed. Use a provided, structured approach to clarify questions, terms, requirements, expectations and ethical, cultural, social and team issues.	Students respond to questions/ tasks with limited options. Choose from several provided structures to clarify questions, requirements, terms, expectations and ethical, cultural, social and team issues.	Students respond to broad tasks/ questions given. Choose from a range of provided approaches or structures to clarify requirements, questions, expectations and ethical, cultural, social and team issues.	*"Students generate questions /aims/hypotheses/purpose framed within structured guidelines".* Anticipate and prepare for ethical, cultural, social and team issues.	*"Students generate questions/aims/ hypotheses/purpose based on experience, expertise and literature.* Delve into and prepare for ethical, cultural, social and team issues.
Find & Generate *What will we use?* Students find information and generate data/ideas using appropriate methodology.	Determined	Students collect and record required information/data using a prescribed methodology from a prescribed source in which the information/data is evident.	Students collect and record appropriate information/data using given methodology from pre-determined source/s where information/data is not obvious.	Students collect and record appropriate information/data from self-selected sources using one of several provided methodologies.	Students collect and record self-determined information/data choosing an appropriate methodology based on parameters set.	Students collect and record information/data from self-selected sources, choosing or devising an appropriate methodology with self-structured guidelines.
Evaluate & Reflect *What will we trust?* Students determine the credibility of sources, information, data and ideas, and make their own research processes visible.	Discerning	Students evaluate sources/ information/data using simple prescribed criteria to specify credibility and to reflect on and improve the process used.	Students evaluate sources/ information/data using a choice of provided criteria to specify credibility and to reflect on and improve processes used.	Students evaluate sources/ information/data and the processes to find/generate, using criteria related to the aims of the inquiry to reflect on and improve processes used.	Students evaluate information/data and the inquiry process using self-determined criteria developed within parameters given. Reflect to refine own and others' processes.	Students evaluate information/data and inquiry process rigorously using self-generated criteria based on experience, expertise and the literature. Reflect to renew own and others' processes.
Organise & Manage *How do we arrange?* Students organise information & data to reveal patterns/themes, managing teams and processes.	Harmonising	Students organise information/data using prescribed structure. Manage linear process provided (with pre-specified team roles).	Students organise information/data using a choice of given structures. Manage a process which has alternative possible pathways (and specify team roles).	Students organise information/data using provided guidelines to choose structures. Manage processes (and teams) with multiple possible pathways.	Students organise information/data using self-determined or group-determined structures, and manage the processes (including team function) within the parameters set.	Students organise information/data using self-determined or group-determined structures and management processes (including team function).
Analyse & Synthesise *What does it mean?* Students analyse information/data critically and synthesise new knowledge to produce coherent individual/team understandings.	Creative	Students interpret given information/data, determine patterns and synthesise knowledge into prescribed formats. *"Ask emergent questions of clarification/curiosity".*	Students analyse trends or themes in several sources of information/ data and synthesise to integrate knowledge into provided standard formats. *"Ask emergent, relevant and researchable questions."*	Students analyse trends or themes in information/data and synthesise to fully integrate component parts in structures that are appropriate to task. *"Ask rigorous, researchable questions based on new understandings".*	Students analyse information/data and synthesise to fully integrate components, consistent with self-determined parameters. Fill knowledge gaps that are stated by others.	Students analyse and synthesise information/data to generalise or abstract knowledge that addresses self-identified or group-identified gaps in understanding.
Communicate & Apply *How do we relate?* Students apply their understanding and discuss, listen, write, perform, respond to feedback and present processes, knowledge and implications of research, heeding ethical, cultural, social and team (ECST) issues and audience needs.	Constructive	Students discuss with each other, listen, read and write to relate their prior and new knowledge to set tasks. Use prescribed language and genre to develop understanding and then demonstrate this to a specified audience. Apply to a similar context the knowledge developed. Follow prompts on ECST issues.	Students use some discipline-specific language and genre to relate their prior and newly developed knowledge to tasks and then to a specified audience. Apply the knowledge developed to several similar contexts and stay within boundaries set for ethical, cultural, social and team issues.	Students use discipline-specific or other appropriate language and select genres to develop understanding and relate this to an audience chosen from given options. Apply the knowledge developed to different contexts and specify the ethical, cultural, social and team issues that emerge.	Students choose appropriate language, genre and performance to extend the knowledge of an audience they have selected. Apply the knowledge developed to diverse contexts and specify ethical, cultural, social and team issues in initiating, conducting and communicating.	Students choose appropriate language, genre and performance to extend the knowledge of a range of audiences. Apply innovatively the knowledge developed to multiple contexts. Probe and specify ethical, cultural, social and team issues that emerge broadly.
Research is not merely gathering more information and generating more data. Research is engaging in all the above facets, time and again.		The RSD, a conceptual framework for Early Childhood to PhD, by John Willison and Kerry O'Regan, with much trialing by Eleanor Peirce and Mario Ricci. October 2006, revised November, 2019. Facets based on: ANZIIL (2004) & Bloom et al. (1956; 1964) Taxonomies. Perpendicular text reflects learning attitudes. Scope & autonomy inspired by Vygotsky (1980). Extent of synthesis is informed by SOLO taxonomy (Biggs & Collis, 1982). Six facets may be used directly with students as a 'thinking routine' (Ritchhart & Perkins 2008). Resources and articles available at www.rsd.edu.au The RSD is the first of the MELT. www.melt.edu.au				

Table 3.1: Research Skill Development Framework 2006/2019

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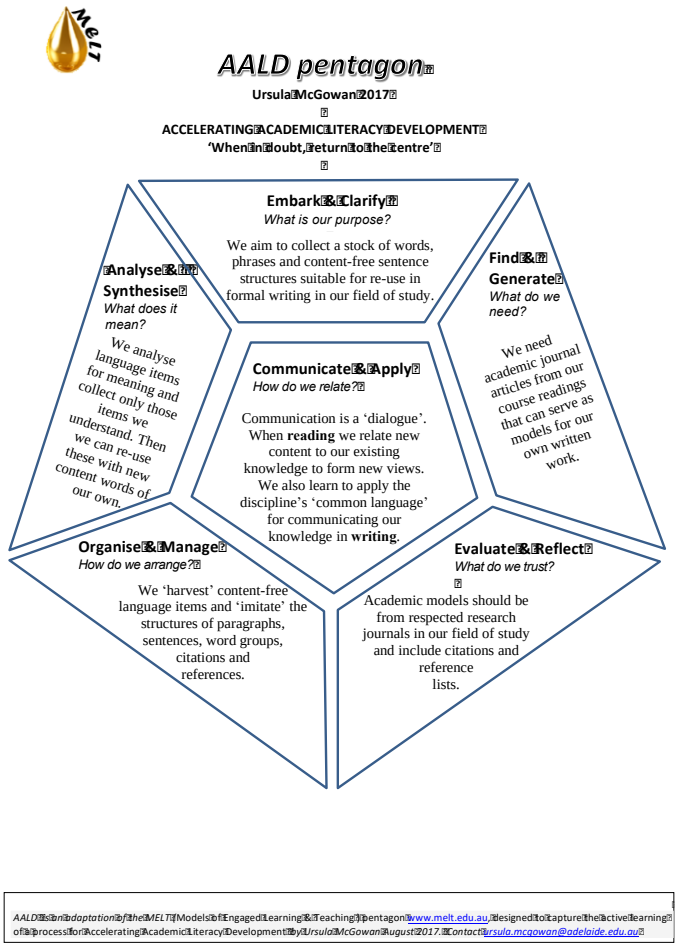
3.3.1. Centrality of language in Learning: AALD Pentagon

The AALD Pentagon (Figure 3.2) is one of the MELT derived from the RSD Framework. The language focus of the AALD pedagogy is demonstrated in the pentagon shape, with the RSD's sixth facet: 'communicate and apply' taking the central position of the pentagon, visibly shown as infusing all other facets of learning. The other five learning facets progressing around the centre demonstrate a progression of the curriculum implementation of the AALD approach, and highlight their interlinked nature to form a holistic understanding of accelerating academic literacy development.

Figure 3.2: AALD Pentagon (in McGowan 2018, p.9)



The AALD Pentagon visibly highlights the centrality of the *learning* focus of the research continuum. The strategy of genre analysis is used as a self-help tool for raising learners' awareness about the way that the language of any 'community of practice' (Lave & Wenger, 1991) is learnt through interaction with members of that community and for the purpose of 'meaning making'. This understanding suggests a notion language learning, in fact, amounts to learners continually 'harvesting language' from the members of that community, reformulating for use in articulating their own meanings and contributing them back to the community; in other words, harvesting language is a natural process that is accelerated when the occasion demands.

3.3.2 Learner-teacher autonomy

For articulating the phases of both learner and teacher autonomy two versions of an Academic Learner-Teacher Autonomy framework (ALTA) were designed. Table 3.2 demonstrates the AALD as a *tool for students* for discovering how to use course-specific readings, and to 'harvest' both the *vocabulary* and *discourse structures* that form the 'language' in which experts of their discipline communicate with each other.

The first ALTA framework demonstrates the student's progress from 'bounded' learning where learners simply follows, to a 'scaffolded' level of autonomy by doing an optional homework task. But, at the conclusion of the round of workshops reported here, there was no expectation of learners to attempt the next stage towards independence by initiating their own independent strategy.

Academic Learner-Teacher Autonomy Framework – for students. The ALTA framework is a reminder that a student's progress in gaining learner autonomy needs revisiting until the underlying principles of the learning strategies are understood and can be applied independently by the learner.

Table 3.2 For students: AALD Tool (McGowan 2018, p.10).

Academic Learner-Teacher Autonomy (ALTA) Framework:
AALD Tool - Students

MELT facets	FOLLOW bounded	IMPROVISE scaffolded	INITIATE open-ended
Embark & Clarify What is our purpose **Find & Generate** What do we need?	**In class**: learners **READ** academic article: identify role of structures & language	**At home:** learners individually identify structure & language in **OTHER** course readings	**In various courses:** learners find and read context based texts as models for writing in any new **CONTEXT**
Evaluate & Reflect What do we trust? **Organise & Manage** How do we arrange?	Interactively learners analyse structures & identify re-usable language items for **HARVESTING**	Learners **PLAN** own assignment based on article structure. **SUBMIT** for formative feedback	Learners **EVALUATE** relevance of context-specific texts as models for writing in **any new context**
Analyse & synthesise what does it mean? **Communicate & Apply** How do we relate?	Interactively learners imitate structures & practise **RE-USE** of harvested language with their own content	Learners (**guided** by **rubric**) apply academic structure and language in **ASSIGNMENT** for assessment grade & feedback	Learners initiate & autonomously adapt AALD pentagon steps of harvesting from readings for **WRITING in any new context**

Academic Learner-Teacher Autonomy Framework – for lecturer. The ALTA framework for teachers as learners promotes the skills for autonomously accelerating their own understanding of the value and methods of guiding students through the processes of harvesting language. Unlike that of student autonomy, the lecturer in the instance of this study is shown to be capable of learning the principles of the pedagogy within the timeframe of the collaborative semester.

Table 3.3 For the Lecturer: AALD Pedagogy (McGowan 2018, p.11)

Academic Learner-Teacher Autonomy (ALTA) Framework:
AALD Pedagogy – Lecturer

MELT facets	FOLLOW bounded	IMPROVISE scaffolded	INITIATE open-ended
Embark & Clarify What is our purpose **Find & Generate** What do we need?	**Literacy**: identified by discipline specialist as gap for students & seeks language specialist's collaboration	**Continuation**: Discipline specialist repeats AALD workshops – minimal request for further support	**Transfer:** discipline specialist uses AALD pedagogy and handouts as models for similar courses in similar contexts
Evaluate & Reflect What do we trust? **Organise & Manage** How do we arrange?	**Adoption** of AALD innovation: times for workshop, learning objectives & assessment in alignment	**Modification** of structural aspects of AALD pedagogy in light of constraints	**Re-organisation** of AALD pedagogy by discipline specialist in continuing or different courses
Analyse & synthesise what does it mean? **Communicate & Apply** How do we relate?	**Co-teaching:** between discipline & language specialists; grades & feedback for assignment	**Adaptation** of workshops in light of students' engagement & learning outcomes	**Scalability:** Discipline specialist autonomously inducts colleagues into AALD pedagogy

In summary, the pedagogy for introducing undergraduate students to the AALD framework was constructed in collaboration between the ALL / ASD Adviser (myself) and the first STEM subject lecturer (SL-1) of this study. The learning and teaching practices for accelerating academic literacy development are founded on four essential elements for the practice informed by the AALD framework (Table 3.4).

3.4 In Conclusion: Key elements of the AALD Framework

The key elements of the AALD Framework are source-based writing, genre analysis,

harvesting language, and learner / teacher autonomy. They are demonstrated in Table 3.4 and summarized below.

Table 3.4 Accelerating Academic Literacy Development (AALD)

Essential elements	for practice informed by the AALD framework
1. source-based writing	for academic literacy practice
2. genre analysis	for pedagogic practice
3. harvesting language	for language development practice
4. learner / teacher autonomy	for sustainability of learning and teaching

The key elements of the AALD Framework are summarised as follows.
ALD requires that learners are inducted into source-based writing. A pedagogic practice based on genre analysis gives learners a chance to be in control. For supporting their own language development, learners use genre analysis to harvest language. When learners have reached the stage of autonomy, they have the capacity to build from there. Students may apply the principle of genre analysis for harvesting language from one discipline to another. Lecturers can apply and extend the pedagogic principles of writing from sources and its basis, reading for writing, to other courses, and they can share their new understandings with colleagues and in academic staff developme

In Australia, the initial integration of ALD into mainstream curricula into a mainstream STEM subject has been successfully attempted through the efforts of ALL advisors and committed practitioners and researchers, some with Government-funded ALTC and OLT grants in the decade around 2010. But their permanence is fragile. Sustained collaboration is not financially viable, and the possibility of spreading pedagogies for AALD on a large scale seems remote. The element of striving for teacher and learner

autonomy is therefore paramount for promoting the sustainability and possible scalability of pedagogies for AALD.

In my 2018 article of this topic while it was developing, I wrote:

> The AALD innovation as described here is a viable beginning to overcoming barriers to curriculum integration, because it is small, simple and potentially self-sustaining. However, while the possibility for the AALD to be sustained without continuing collaboration can be demonstrated in an individual set of circumstances, more research is needed. It needs to be established whether the context and conditions in which sustained integration was successful can be replicated, in order that equitable access to academic literacy development along similar lines may become the norm rather than the exception for the diversity of students in higher education of the 21st century. (McGowan, 2018, p,13)

From my professional activities of face-to-face advising and small group workshops emerged my conviction that the role of language in forming thoughts and constructing knowledge (Vygotsky 1934/1986) is often poorly understood and largely undervalued. The need for students' grasp and production of language to continue to develop, and to adjust to each new context and circumstance, was clear not only theoretically from studies in language development and pedagogy, but also in practice, from my personal experience of second language learning and teaching university students and staff with learning and teaching academic writing development was that language tended to be 'taken for granted'. Some linguists call it a 'transparent medium' (Coffin & Donoghue, 2014), not at all in the sense of being 'clearly understood' but rather that it is invisible, unrecognised, and therefore ignored. It is commonplace in higher education to assume that students who can 'communicate' orally can also write appropriately for differing

contexts.

Autonomy, in the two Academic Learner-Teacher Autonomy Frameworks, means that the learner has achieved a deep level of understanding of a new aspect of knowledge, and therefore the capacity to build that knowledge and contribute to their discourse community. Further research may consolidate or extend this study's findings and confirm whether autonomy as a goal is the *missing link* for the sustainability and scalability of existing and future designs of ALD across the undergraduate curricula of our universities.

Chapter 4: Methodology and Method

This investigation is a longitudinal case study of the integration of the sustained integration of a module for Accelerating Academic Literacy Development (AALD) into a 2nd year Science, Technology, Engineering, and Mathematics (STEM) curriculum.

The research methodology draws on principles of qualitative methodology developed from 'grounded theory' Glaser and Strauss (1967) as explicated by Guba and Lincoln (1989), Lincoln and Guba (2013), Charmaz (2005) and Stake (2005). The data analysis follows *abductive* principles, derived originally from the philosopher and pragmatist Charles S. Peirce, and explicated by Dubois and Gadde (2002), Reichertz (2010), Timmermans and Tavory (2012), and the method of analysis detailed by Dubois and Gadde (2002; 2014) as 'systematic combining'. The author's own role, as researcher, includes elements of 'participant observation' (Kemmis & McTaggart, 2005).

Section 4.1 of this chapter deals with the epistemological aspects of the study, considering the nature of naturalistic inquiry, the trustworthiness criterion applied to the study, and the theories and literature that underpin its methodology. Section 4.2 considers the operationalisation of the methodology, presenting the specific methods of data generation and analysis.

4.1. Epistemological Aspects of the Study

> Case studies enable a researcher to study contemporary phenomena in a real-life setting, where boundaries between context and phenomenon tend to be blurred (Dubois & Gibbert, 2010, p.130)

4.1.1 AALD Case Study of an Innovation – A 'Call to Action'

The initial interest was in a specific case, because it was a highly unusual one for the author, not only because a STEM lecturer, who had had no prior experience of linguistic pedagogy, would *request collaborative support* for introducing academic literacy development (ALD) into her curriculum, but also because she would independently maintain and adapt the curriculum-integrated pedagogy in successive years. The author's initial interest was to identify context and conditions in which her motivation was stimulated to do so, and autonomously consolidate the literacy focus within her course.

The author's ethical commitment to student learning has been to address the twin problems in current higher education contexts of dissatisfaction by academics with coursework students' levels of communication skills, and the incidence of student plagiarism. Low communication skills were addressed as a learner deficit, to be rectified by remedial support. Plagiarism, which was broadly defined as using the words of 'others' without 'proper acknowledgement' (East, 2005), was open to misinterpretation. Academic language and learning (ALL) advisors saw that plagiarism could be unintentional and related more to a lack of academic 'word power' or understanding of the logic of research writing than evidence of the intention to deceive their assessors (Bretag et al. 2014, East, 2016; Howard, 1999; McGowan, 2005; 2008; 2010).

4.1.2 Naturalistic Inquiry and Constructivist Perspective

Qualitative methodologies, and case studies in particular, provide forms of inquiry considered appropriate for educational research, where quantitative, statistical data may be inadequate for a detailed, in-depth picture of participants' experience, and

where a ‘call to action’ was the underlying reason for the research. Calls for ‘responsive’ investigations arose as a result of frustrations at the lack of action following research findings in the social sciences (Guba & Lincoln, 1989; Stake, 2005).

Although case studies are widely accepted as a powerful means for engaging in research into education, case study approaches have not always been accepted as ‘proper’ scientific research because results of case research do not lend themselves to generalisation.

However, the purpose of ‘naturalistic inquiry’ of a case study differs fundamentally from studies under an inductive paradigm. The latter utilise quantitative evidence from representative population samples for *confirming* or disproving prior hypotheses, the results to be generalised as valid for wider populations. In contrast, the strength of case study research is to probe deeply into contextual factors and conditions of dynamically changing real-life events in order to infer or suggest probabilities that could answer ‘why’ questions (Yin, 2009). Case studies aim to *discover* the unexpected, to build on or develop existing theories, and to provide new insights (Stake, 2005). While *deductive* logic forms the basis for a ‘positivist’ paradigm for arriving at generalizable results, *inductive* logic of grounded theory (Glaser & Strauss, 1967) derives its validity and strength from demonstration of methodological ‘trustworthiness’ (Guba & Lincoln, 1989, Lincoln & Guba, 2013).

4.1.3 Trustworthiness of ‘Naturalistic’ research

In 1989 Guba & Lincoln outlined ‘naturalistic inquiry’ and a ‘responsive constructivist’ paradigm as a ‘fourth generation evaluation’ alternative to three previous generations of ‘positivist’ (also called ‘rationalist’) paradigms, which they characterised as ‘measurement-oriented, description oriented and judgment oriented’ respectively (1989

p.8).

To explain the rationale for an alternative to the scientific paradigm, Guba and Lincoln stressed the 'problematic nature of human knowledge' and the failure of research based on measurement, description and judgment to capture, and seek to understand, the complexity of contextual factors of human experience that shape human thought, knowledge or behaviours:

> To say that there is scientific evidence supporting such and such a proposition is tantamount to saying that it is indubitably and forever true (Guba & Lincoln, 1989 p.68 – original emphasis).

The intention of the 'constructivist' (fourth generation) inquiry paradigm was to 'move beyond mere science – just getting the facts – to include the myriad of human, political, social, cultural and contextual elements that are involved' (Guba & Lincoln, 1989, p.8).

In this paradigm the practice of inquiry into human knowledge and behaviours takes account of the complex pattern of interconnected experiences and the conditions under which people perform in specific contexts. Positing social reality as *constructed* within the experience of its participants, rather than as 'absolute truth', was shown by Guba & Lincoln (1982) as basic to the formulation of differences between the two paradigms from five perspectives: 'the nature of reality, the nature of the inquirer-object (or respondent) relationship, the nature of truth statements, assumption about causal relationships, and the role of values' (Guba & Lincoln, 1982, p.249).

4.1.4 Trustworthiness Criteria for Constructivist Inquiry

Constructivist criteria for judging the quality of naturalistic inquiry were designed to parallel the *foundational criteria* of scientific research standards of 'internal validity',

'external validity', 'reliability', and 'objectivity'. Their constructivist counterparts, under the umbrella term of *trustworthiness criteria* were 'credibility', 'transferability', 'dependability' and 'confirmability'. Guba and Lincoln (1989, p.233-243) provided the following explanations and guidelines for their application.

1. Credibility was the parallel criterion to 'internal validity' or the search for factual 'truth'. The thrust in constructivist inquiry was:

> the match between the construed realities of respondents (or stakeholders) and those realities as represented by the evaluator and attributed to various stakeholders (Guba & Lincoln, 1989, p.237).

2. Transferability was the constructivist replacement for 'external validity' or 'generalisability'. The degree of transferability of the findings in constructivist research was expected to be judged against all the working hypotheses of the particular study, in light of detailed information about the contexts 'in which those hypotheses were found to be salient'. To meet this criterion the researcher provides:

> as complete a database as humanly possible in order to facilitate transferability judgments on the part of others who may wish to apply the study to their situations (or situations in which they had an interest) (Guba & Lincoln, 1989, p.242).

'Thick description' is a term attributed to Gilbert Ryle and elaborated by Clifford Goertz (1978) cited by Guba and Lincoln (1989, p.241). Thick description was given as the major strategy for 'establishing the degree of transferability'. The researcher's propositions are only intended to be 'working hypotheses … liable to disconfirmation or assessment of non-utility, even in the same context, at a later period of time' (Guba & Lincoln, 1989 p.241).

3. Dependability replaced the scientific criterion of 'reliability' and related to the 'stability of the data over time'. Methodological changes over time in constructivist approaches were not seen as signs of instability but rather as 'products of an emergent design dedicated to increasingly sophisticated constructions'. In fact, such changes and shifts were considered to be indicators of 'maturing – and successful – inquiry'.

The strategy proposed to ensure dependability is that all decisions about developments of the inquiry processes and method are carefully documented. The level of dependability of the study should be capable of being judged by the reader in the light of 'what salient factors in the context led the evaluator to decisions and interpretations made' (Guba & Lincoln, 1989, p.242). Documentation of the logic of changes in *processes* was labelled metaphorically as a 'dependability audit'.

4. Confirmability is the constructivist parallel to 'objectivity' in scientific paradigms. Confirmability depended on processes that ensure that the *data* could be tracked, and 'that the logic used to assemble the interpretations into structurally coherent corroborating wholes is both explicit and implicit in the narrative of the case study' (p.243). This process was also likened to an audit. Whereas the *dependability audit* referred to the logic of methodological changes, a *confirmability audit* would provide assurances about the integrity of the data ('facts figures and constructions') and the logic of the inferences drawn from them (Guba & Lincoln, 1989, p.243).

Thus, constructivist research was demonstrated to be appropriate for research that aims to address inequitable social issues and provoke action as a result. These criteria were applied to processes and products of this study. The *author of this current study* was deeply involved in the inquiry process and drew on multiple data sources that include not only the 'constructed realities' of individual participants but also the contextual factors and conditions in which their perceptions were formed; data are also

drawn from the professional literature and combined with the researcher's own background experience and insights. The author provides access to a 'vicarious experience' of a specific phenomenon that is a complex web of interconnected experience of 'others' within their own contexts. By adhering to the *trustworthiness criteria*, the researcher ensures that the representation of this complex web is dependable, confirmable and therefore credible, and opens up possibilities for readers to make 'transferability judgments' if they are moved to 'apply the study to [...] situations in which they had an interest' (Guba & Lincoln, 1989, p.242).

The methodology for this study is located within the shift to 'fourth generation' research methodologies, a 'call to action' (Guba & Lincoln, 1989; 2005) but developed into the 21st century. It involves a re-purposing of 'Grounded Theory' for 'advancing social justice issues' (Charmaz, 2005) prompted by an ethical commitment to address issues of inequity and the desire to 'go beyond interpretation and [...] understanding towards social action [...and] attract champions who might follow through' (Guba & Lincoln, 2005, p. 201).

4.1.5 Participatory Inquiry

This investigation takes from Heron and Reason (1997) the concept of 'participatory inquiry'. This is laid out in terms of 'critical subjectivity and four ways of knowing': experiential, presentational, propositional, and practical knowledge and explained in the following terms:

1) experiential knowledge, as 'direct encounter'; 'face-to-face meeting'; knowing through participative, empathic resonance' (pp.280-281)

2) presentational knowledge as 'grounded in experiential knowing', (p.281)

3) propositional knowledge 'in conceptual terms'; it is expressed in statements, theories; propositions (p.281)

> 4) practical knowledge as knowing 'how to do something, demonstrated in a skill or competence'; 'it fulfills the three prior forms of knowing, brings them to fruition in purposive deeds. (Heron & Reason 1997, pp. 280-281).

The implication is that, while participatory inquiry accepts knowledge gained in subjective experience, it requires the researcher to avoid 'naïve' acceptance of subjective experience, by including primary experience with critical awareness of 'the other three ways of knowing' (Heron & Reason 1997, p.282). An explanation in terms of awareness of both 'authentic value and its restrictive bias' provides some reasonable safeguards against bias occurring due to undue influence from personal experience.

4.1.6 Analysis Framework: Abductive Reasoning and Systematic Combining

In this study, the task of synthesising of activity data with contexts is performed using an abductive approach to data analysis and interpretation, following a pattern of 'systematic combining' as detailed by Dubois and Gadde (2002; 2014). These authors describe a qualitative approach to case study data gathering and analysis that has been labelled 'abductive approach' and an analysis method of 'systematic combining' of theory with empirical data, for application to case studies where the purpose of the research is to reach a deep understanding of the contextual conditions that give rise to a particular phenomenon.

The term 'abductive reasoning' was used in the early 1900s by the American philosopher C.S. Peirce in his development of pragmatism. Abduction refers to a process of 'inferencing' from observed data that enables 'useful explanations' to be developed (Richardson & Kramer, 2006, p.499). Dubois and Gadde (2002; 2014) explain how abductive analyses differ from both 'inductive' and 'deductive' approaches:

> ‘Deductive approaches are concerned with developing propositions from current theory and make them testable in the real world’ while ‘inductive approaches rely on grounded theory’ (referring to early work by Glaser & Strauss, 1967) ‘where theory is systematically generated from data’.

In an abductive approach, however, the concern is ‘theory development’, rather than ‘theory generation’ (Dubois & Gadde, 2002, p.559). The authors describe a process of *systematic combining* as a non-linear approach to data collection and analysis that ‘builds more on refinement of existing theories than on inventing new ones’ (Dubois & Gadde, 2002 p.559). While it employs aspects of Grounded Theory (Guba & Lincoln, 1989, 2005) the process of *systematic combining* includes a conceptual framework of the author’s initial theoretical position (‘articulated preconceptions’) and rejects the Grounded Theory constraint that all theory be generated solely from the data.

The key elements of abductive reasoning and the analytical approach of *systematic combining* are ‘matching’, ‘direction’, and ‘redirection’ of the framework:

> In studies relying on abduction, the original framework is successively modified, partly as a result of unanticipated empirical findings, but also of theoretical insights gained during the process (Dubois & Gadde, 2002, p.559).

The direction of the framework of a researcher’s original assumptions may be re-directed during the process of data analysis and in the light of unexpected findings and insights. This approach is designed to ‘create fruitful cross-fertilization’ when original and newly emerging theoretical concepts are matched with further empirical data.

The authors, Dubois and Gadde, present systematic combining as a ‘confrontation of theory with the empirical world that is continuous throughout the process of data collection, coding and analysis’ (Dubois & Gadde, 2014, p.555). Matching in this

context consists of 'going back and forth between framework, data sources and analysis'. This process is demonstrated in the diagram Figure 4.1. In this model for systematic combining, strategies for the direction of data collection are aimed at 'a search for specific data in line with the current framework'. The use of multiple sources, the movement back and forth between theory, the empirical world, the framework and the case, may therefore also result in redirection of the entire study.

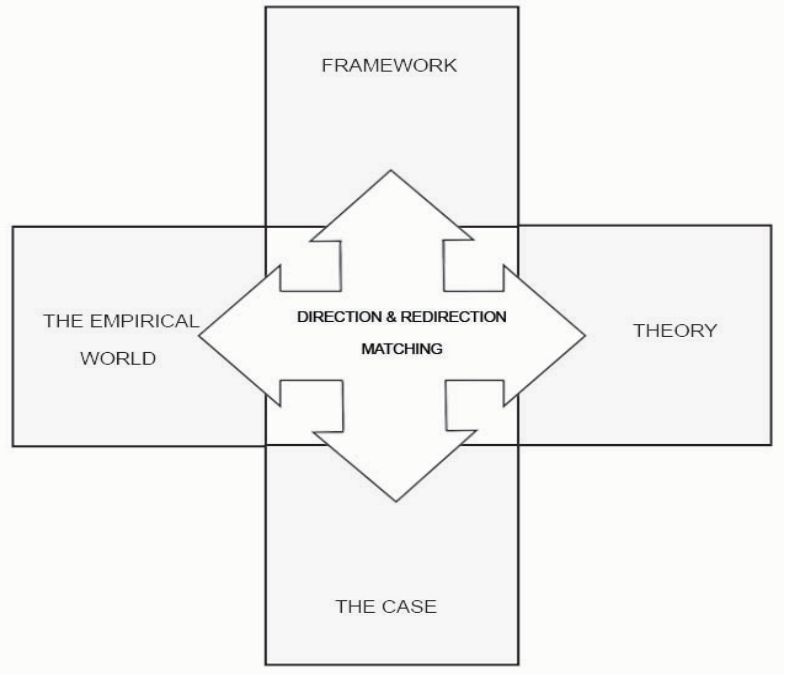


Figure 4.1 Systematic combining (Adapted from - Dubois & Gadde, 2002, p. 555).

THEORY: Academic literacy integration: possibilities and challenges.
FRAMEWORK: AALD pedagogy, staff and student engagement
THE CASE: Collaboration and autonomy
THE EMPIRICAL WORLD: Case participants, contexts, motivations.

4.2 Method

Systematic combining has been useful for conceptualising the present study as a longitudinal case study. The concept began with the case of one individual adopter, a lecturer in a Discipline of the ASCU's STEM Faculty. The interest lies in the fact that

this STEM lecturer did not only accept the AALD framework by collaborating and co-teaching with the author of this study, but also, thereafter, continued independently to apply the concept of the AALD framework within her mainstream curriculum, and independently maintained and developed it further.

The case study was able to be enriched when a second-generation of the AALD pedagogy (STEM Lecturer-2) afforded the author the chance to grasp the opportunity of a repeated involvement in the process of collaboration and co-teaching.

The first- and second-generation adopters of the AALD pedagogy are referred to in this study as STEM Lecturer-1 and STEM Lecturer-2 (SL-1 and SL-2) respectively.

A third phase was added by the author in the following year. This was designed by the author to broaden access to an understanding of the university culture in which the collaborations occurred. Table 4.0 captures three 'phases' during which the case study changed its focus from one individual teacher to the multifaceted 'phenomenon' of Curriculum-integrated ALD.

4.2.1 Data Gathering

Although this study's origin dates back to 2011, the beginning of the author's formal research engagement for this study was not until 2014. In that year, the first STEM lecturer (SL-1) began her third year of independently maintaining the pedagogy academic literacy development module (AALD) within her curriculum. The research methodology for this study was able to be extended in 2015 as Phase 2, and 2016 and 2017 as Phase 3. For a complete timeline see Appendix A1.0.

The context of the author's PhD candidature itself influenced data gathering. As a half-

time enrolment into the author's retirement in 2014 allowed an extended timeframe for the investigation, it has been possible to allow the research framework to adapt to contextual changes. On the one hand, the development of a pedagogy that was adaptable to accommodating or welcoming changes was crucial. On the other hand, the additional time provided the author with welcome opportunities for re-directing the focus and broadening the scope of the case (Dubois & Gadde, 2012, 2014).

As part of these developments, details of the research aims and questions were also modified. The practice of taking advantage of emerging requirements or opportunities for additional data was in line with accepted practices described in theoretical discussions on the advantages of case study research.

An initial ethics clearance was provided for Phase 1 by the university's Human Resources Ethics Committee (HREC) in 2014 and was updated successively for Phases 2 and 3 in 2015 and 2016 respectively.

Table 4.0 Three phases of data gathering

Data Phase 1: 2014 STEM Lecturer-1	Data Phase 2: 2015 STEM Lecturer-2	Data Phase 3: 2016 Faculty Staff survey, interviews, focus group
1st generation adopter Practices & views: Author's record of a sustained adoption of curriculum-integrated academic literacy (AALD)	2nd generation adopter Collaboration and views: Participant observer researcher both supporting and investigating 2nd generation adoption of AALD	Additional information Broader range of experience: Researcher probing perceived possibilities and barriers to curriculum-integrated academic literacy
Data on adopter autonomy	Data on transferability	Data on staff views of Academic Literacy

While the investigation began as a single case study of a STEM discipline lecturer's adoption and progressive modifications of the AALD-based literacy development into

her science curriculum (Phase 1), the handover of the course to SL-2 in 2015 provided access to a second set of data that could widen the exploration to include possibilities for the transferability of AALD pedagogy to a second-generation adopter of the innovation (Phase 2). To assist the second lecturer's induction into the workshop activities designed for AALD, the author targeted the opportunity to co-teach the four sessions with her, as I had done in 2011 for SL-1.

In 2016 a third data set (Phase 3) was sought to extend the study further. While transcribing and coding the interviews of Phases 1 and 2, the author noted a gap in the range of data relating to the 'barriers' to curriculum integration of academic literacy. It was therefore decided to explore the experiences and perceptions of a variety of mainstream academics and support teaching staff. An anonymous staff survey in 2016 was given human ethics clearance and was supplemented by 'purposive sampling' for additional interview and focus group information.

In summary, data provided insights into factors and conditions that promoted the initial STEM lecturer's autonomy in making the AALD her own; the opportunity for the Researcher to collaborate with a second generation adopter (SL-2) provided a perspective on the transferability of the approach and prompted exploration of the sustainability of the innovation; while Phase 3 informants' perceptions of literacy problems and institutional challenges in the current context of Australian higher education served to explore the prospects of scalability of a curriculum-integrated literacy approach within the tertiary sector. Tables 4.1, 4.2 and 4.3 set out the data gathered for Phases 1, 2 and 3 respectively.

Tables 4.1, 4.2 and 4.3

Table 4.1 DATA for Phase-1		
Item	Code*	Detail
SL-1 2014 transcript	D1.1	SL-1 2014 Semi-structured interview transcript SL-1 2014 call for advisory meeting: outside declared data] * see below]
AALD 2014 Curriculum documentation	D1.2	a) AALD 2014 Workshops: Background (online: LMS) b) AALD 2014 Worksheets for Sessions 1-2-3-4 c) AALD 2014 Workshop-1 recording transcript excerpt (from the University's Learning Management System)
AALD 2011: Original Curriculum documentation	D1.3	a) AALD 2011 Workshop Information Handouts b) AALD 2011 Worksheets 1-2-3-4 Appendix 4
**Note concerning 2014 SL-1*		** 2014 SL-1 call for a meeting:* *During 2014 teaching semester sought advice. The meeting was recorded but was not part of the ethics clearance. It is recorded here only for the fact that this meeting, initiated by SL-1 took place (see 5.1.2.5)*

Table 4.2 DATA for Phase 2		
Item	**Code**	**Detail**
SL-2 2015 Interview transcript [continuous numbering: 1-36; 37-236]	D2.1	a) SL-2 2015 Semi-structured interview Part 1 transcript [recorded 2/09/2015] #1-36 b) SL-1 2015 Semi-structured interview Part 2 transcript [recorded 10/11/2015] #37-272
AALD 2015 Curriculum documentation	D2.2	a) AALD 2015 Workshop information on LMS (online) b) AALD 2015 Worksheets [= AALD 2014 Worksheets] (online & hard copy)
AALD 2015 Supplementary data*	D2.3	AALD 2014 Two student interviews

Table 4.3 DATA for Phase 3		
Item	**Code**	**Detail**
Phase 3.1 Staff survey	D3.1	Academic teaching and professional staff
Phase 3.2 Staff interviews	D3.2	Volunteers invited from within the survey
Phase 3.3 Focus Group discussion	D3.3	Faculty-based ALL advisory group

4.2.2 Data Analysis

Data Analysis Phase 1

The aims for Phase 1 of the investigation were to identify factors and conditions that engaged and sustained the STEM lecturer in the integration of the AALD into her course. The findings were to be set against contemporary contexts and conditions that can either function as barriers to offer possibilities for mandating quality standards for undergraduate students' progressive academic literacy levels across a school, a faculty, an institution, or, in the long run, the Australian tertiary sector.

The questions to be investigated in Phases 1 and 2 concerned the changes that had taken place in the learning and teaching resources, method of delivery, assessment, feedback and learning outcomes.

The questions to be investigated in Phases 1 and 2 concerned the changes that had taken place in the learning and teaching resources, method of delivery, assessment, feedback and learning outcomes. They also concerned the difference between the experience of the first and second generation adopters of the AALD based pedagogy.

The aim for the data analysis of phases 1 and 2 was to investigate the following research questions:

1. Why did the lecturer use the AALD based pedagogy: her expectations, levels of satisfaction and perceptions of learning outcomes? (CONTEXT AND CONDITIONS)
2. How was the lecturer inducted into the AALD conceptual self-help framework of genre analysis for harvesting language and how did she contribute to its development? (COLLABORATION AND AUTONOMY)
3. What evidence of learner engagement with the AALD pedagogy was identified by the lecturer? (AALD PEDAGOGY AND LEARNER ENGAGEMENT)
4. What possibilities and challenges were identified by the lecturer for the integration of the AALD based pedagogy into the STEM curriculum? (POSSIBILITIES AND CHALLENGES).

These searched for insights into the lecturers'

- levels of acceptance of the AALD principles, and her satisfaction with her students' learning outcomes (retrospectively, 2011-2013, and at the start of this study, 2014),
- Indicators of autonomy developed in adapting the AALD to her understanding of the 2nd year STEM students' learning needs, learning styles and perspectives on language development,
- perception of the value of curriculum integrated AALD and possibilities for the sustainability, and
- their views on barriers to a more broadly-based uptake of the AALD,

Data Analysis Phase 2

The same questions to be investigated in Phase-2 as for Phase 1 sought insights into

the differences between first generation adopter and the second generation adopter of the AALD-based pedagogy; and to identify possibilities for the sustainability and longer term embedding of the pedagogy into mainstream curricula.

Phase 3

From a scrutiny and analysis of the data collected for Phases 1 and 2, a need emerged for more information from a broader range of academic teaching staff, not only for the possibilities but also on the challenges and barriers they perceived or foresaw with the introduction of a curriculum-integrated academic literacy focus. The intention was to survey as many of the academic staff of the author's university as possible.

The views of a cross-section of discipline academics, learning specialists and language advisors of this university were sought, with the aim of investigating:

1. a range of perspectives that would support the integration of discipline-specific academic literacy development into mainstream curricula (POSSIBILITIES AND CONTEXTS)
2. a range of perspectives that would block the integration of discipline-specific academic literacy development into mainstream curricula (CHALLENGES AND BARRIERS).

The interview transcripts from SL-1, SL-2, (Phases 1 and 2), and from Phase 3.1 (Faculty-based lecturers' Survey), Phase 3.2 (Survey follow-up interviews), and Phase 3.3 (Advisory staff Focus Group) were colour coded. The data were manually scrutinised. The process of colour coding was devised in order to allow maximum flexibility for comparing, revisiting and synthesising the information and 'discover' connections between and across the data, as indicated in Dubois and Gadde's (2002)

approach of ‘systematic combining’ (Figure 4.1 earlier in this Chapter).

Chapters five and six report findings from the analysis of data gathered over three phases of this study. Findings from the analysis of Phase 3 data, which consist of the views of a range of academics employed at the ASCU, are reported in Chapter six. The findings from all three sources are summarised and discussed in response to the two overriding research questions on possibilities and challenges for a more widespread adoption of processes of integrating ALD into mainstream curricula.

Chapter 5 Analysis and Findings: Phases 1 & 2

Introduction

Chapter five deals with information provided during Phases 1 and 2 by two STEM Lecturers (SL-1 and SL-2) who were instrumental in demonstrating the integration of the AALD pedagogy into the curriculum of teaching and assessment of a second-year undergraduate science subject within the ASCU's STEM faculty.

Lecturer SL-1 collaborated with the author in 2011 to integrate a framework for Accelerating Academic Literacy Development (AALD) into her year-two undergraduate curriculum. SL-1 independently maintained the AALD module within the same subject in the following three years (2012 to 2014). The study began in 2014 with Phase 1, in the third year of the independent continuation of the AALD module by SL-1. Phase 2 began in 2015 with the author's collaborative introduction for lecturer SL-2 into the existing AALD framework. The lecturers are represented as first-and second-generation adopters of the innovation.

Chapters five and six report findings from the analysis of data gathered over three phases of this study.

Two aims envisaged for Chapter five were, first to explore the reasons why STEM Lecturer-1 (SL1) participated in the initial (2011) design of the AALD pedagogy and how she gained the confidence to continue using it in the same course for the following three years; and second, how the second lecturer, STEM Lecturer-2 (SL2) adopted and adapted the existing AALD curriculum and pedagogy.

The chapter rounds off with a comparison between first- and second-generation adopters of the pedagogy and a projection of possibilities of the self-perpetuation might proceed in the long term. The organisation of sections 5.1 and 5.2 follows the

questions posed by the aims for the two STEM lecturers. Section 5.3 is a summary of the findings and their contribution towards responses to the overall research questions. The data analysis for Phases 1 and 2 is reported within the framework of four pairs of a-priori (etic) themes based on the overall research questions of this study:

1. context and conditions
2. collaboration and autonomy
3. AALD pedagogy and learner engagement
4. possibilities and challenges

The four pairs of **etic** themes were matched with four questions against which the data analysis of phases 1 and 2 was performed:

5. Why did the lecturer use the AALD based pedagogy: her expectations, levels of satisfaction and perceptions of learning outcomes? (CONTEXT AND CONDITIONS)
6. How was the lecturer inducted into the AALD conceptual self-help framework of genre analysis for harvesting language and how did she contribute to its development? (COLLABORATION AND AUTONOMY)
7. What evidence of learner engagement with the AALD pedagogy was identified by the lecturer? (AALD PEDAGOGY AND LEARNER ENGAGEMENT)
8. What possibilities and challenges were identified by the lecturer for the integration of the AALD based pedagogy into the STEM curriculum? (POSSIBILITIES AND CHALLENGES).

Questions 1, 2 and 3 frame the analyses for Phase 1 and Phase 2 respectively. Question 4 addresses the key questions of this study, the possibilities and challenges for curriculum-integrated literacy development, from the perspectives of the first- and second-generation adopters of the AALD approach (SL-1 and SL-2)

5.1 Phase-1: STEM Lecturer-1

The data for Phase-1 of this study consisted of three sets of evidence as set out in Table 5.1.''Code' refers to the code assigned to the data in the following text, for example:

> D1.1 stands for 2014 data from STEM Lecturer-1: Interview (January 2015).
>
> D1.2a, b, c, stand for 2014 AALD workshops resources (year of PhD enrolment).
>
> D1.3 refers to 2011 AALD worksheets, handouts (constructed in the year of the origin of the AALD pedagogy).

Table 5.1 Data set for Phase-1

Item	Code*	Detail
SL-1 2014 interview transcript	D1.1	SL-1 2014 Semi-structured interview transcript 2014 SL-1: call for advisory meeting: outside declared data*
AALD 2014 Curriculum documentation	D1.2	a) AALD 2014 Workshops: Information (online: LMS) b) AALD 2014 Worksheets for Sessions 2-3-4 (as 2011) c) AALD 2014 Workshop-1 recording transcript excerpt (LMS = University's Learning Management System)
AALD 2011: Original Curriculum documentation	D1.3	a) AALD 2011 Workshop Information b) AALD 2011 Worksheets 1-2-3-4
**Note concerning 2014 SL-1*		** 2014 SL-1 call for a meeting:* *During 2014 teaching semester SL-1 sought advice. The meeting was recorded but was not part of the ethics approval. It is recorded here only for the fact that this meeting, initiated by SL-1 took place (see 5.1.2.5)*

5.1.1 Context and Conditions

Table 5.2 Context and Conditions (SL-1)			
THEME (etic): a-priori theme	Sub-themes (emic): themes emerging from the analysis	Evidence (data)	Data sources
CONTEXT	RECENT APPOINTEE: 2011 **(Three years before PhD commencement)**	- 2nd Year STEM course, 4th Year thesis - Teaching at University course (TaU 2011) - ASD and ALL co-location	D1.1 [SL-1 2014]
CONDITIONS	PRIORITIES AS A TEACHER	- problem to solve: learner motivation, engagement - previous year's teaching experience	D1.1 [SL-1 2014]
	PERSONAL ATTRIBUTES: COMMITMENT TO STUDENT LEARNING	- empathy, - fairness, - equity - scholarly approach to assessment	D1.1 [SL-1 2014] D1.2c [AALD Workshop 1 recording 2014]

Q1: Why did SL-1 use the AALD based pedagogy: her expectations, levels of satisfaction and perceptions of learning outcomes? (CONTEXT AND CONDITIONS)

The first pair of the etic themes concerns the *context* and personal *conditions* that caused STEM Lecturer-1 to learn about and apply the AALD approach within her curriculum in 2011. Within these and other etic themes that framed the analysis, emic sub-themes emerged that analytical approach to the data.

The CONTEXT analysis deals with data for two contextual factors and six CONDITIONS that were identified. In 2011, SL-1 had found that in the CONTEXT of her undergraduate students at both second year and fourth year (near completion) levels were experiencing similar problems in academic writing. As she was expected to attend the ASCU's academic staff development program for Teaching at University

(TaU), she found a brief demonstration session of AALD (by the author of this study).

5.1.1.1: STEM year-2 course. The first contextual factor was the STEM lecturer's disciplinary learning and teaching context in 2011, when she was motivated to introduce an academic literacy focus into the curriculum of a 2nd Year STEM course. She was motivated through the combination of a set of fortuitous circumstances and a personal commitment to supporting the learning of all her students. In the first year of her academic appointment to a STEM discipline, the lecturer had evaluated the learning outcomes for the second-year undergraduate students in a course which she had inherited. SL-1 judged that the reason for students' problems in building the technical knowledge of her subject was that they had not engaged well with content during the early weeks of the course. On the other hand, in her role as supervisor and examiner of 4th year (Honours) projects, it was her final year students' levels of written language that she had found wanting, as she recalled in her 2014 interview with the author (D1.1, 6-14).

5.1.1.2 Teaching at university course. A second contextual factor was that, at the time of the lecturer's appointment to one of the STEM disciplines, the University's teaching development policy required commencing staff to complete, within the first three years of their employment, the *Teaching at University* (TaU) course comprising eight face-to-face meetings of three-hour duration weekly and assessable work. The lecturer recalled that the timing was fortuitous:

> So I did that […] around Easter 2011 […] It was pretty good timing I guess, because I'd just taught this second-year course for the first time in second semester 2010. And then you ran your workshop as part of the Teaching at University program, and that sparked off a bunch of ideas (D1.1, 17)

It was the lecturer's experience of a half-hour workshop which led to her collaboration

with the Academic Language and Learning (ALL) Adviser (author of this study).

5.1.1.3 ASD & ALL Co-location. A third contextual factor was the co-location of the services for Academic Staff Development (ASD) and the Academic Language and Learning (ALL) advisors in the university's Learning and Teaching Unit (LTU). The co-location provided both informal and formal possibilities for ALL advisors and Staff Developers to share the experiences and expertise from the perspectives of their own sociocultural and linguistic specialisations. In this LTU it was understood that all its services (which also included e-Learning Development and a Mathematics Learning Service) had the same fundamental purpose: to facilitate student learning. It was in this atmosphere of cooperation that it was also not only possible, but normal practice, for staff from each of the services to offer (or be invited) to contribute to the ASD program.

The knowledge which the Lecturer had gained from her own experience as a learner in a STEM discipline, together with her personal attributes and priorities as a teacher, provided the conditions that impelled her to make the time and effort needed for incorporating the AALD as an integrated module into the teaching, practice exercises, feedback, and summative assessment of her second-year undergraduate geoscience course. SL1's first subtheme for 'Conditions' was Priorities as a teacher, which relate to two emic factors, Problems to solve: Initial motivation and Prior learning-teaching experience.

5.1.2 CONDITIONS

5.1.2 1. Priorities as a teacher: Problems to Solve: Initial Motivation. The Lecturer had identified three different 'high priority' reasons for re-designing the year-two undergraduate course after teaching it in 2010 (D1.1, 7). She was motivated to

collaborate with the literacy adviser in the expectation that curriculum-integration of the AALD approach would serve three of her own objectives as an academic teacher. These were to foster second year students' early engagement with the course content; to improve their writing skills by introducing them to academic readings**;** and to prepare students for their fourth-year research writing requirement:

> One of those [priorities] – from a kind of technical content perspective, was that I wanted to get the students to integrate the content better between the different modules […]
>
> But I also wanted to increase their writing skills, – and – also introduce some academic reading to the course, because there wasn't any requirement for reading any academic texts at all, so I wanted to introduce them to some of that.
>
> I have examined and supervised a few […] Honours projects for a couple of years, and wasn't too impressed by that, by their writing skills […] so I wanted to incorporate something like that into the [year 2] course (D1.1, 9-13).

When she was introduced to the AALD concept of analysing the language of academic readings that were relevant to course content, the Lecturer conceived the idea that the AALD approach might be able to serve these learning-teaching priorities at one-and-the-same time.

5.1.2 2. Prior year's Teaching Experience. The Lecturer's prior experiences ranged from her time as a STEM student and of writing her own dissertation, to teaching at second- and fourth-year levels, and to her engagement with the scholarship of learning & teaching. Underlying her interest in promoting students' writing development was her own background of learning how to write her PhD thesis and experiencing the difference between day-to-day spoken language and formal, academically written communication:

> I guess communication is something I was always quite good at, [but] I was never very good at writing; my PhD supervisor had to beat it into me how to write properly [chuckle] you know, red marks all over everything. […] And I guess that's a natural part of being the supervisor, isn't it, of graduate students, that is, you're teaching students how to write and communicate their science better, and there is a natural progression then, to starting to teach undergraduate students (D1.1, 325).

At 4th Year (Honours) level the Lecturer had already begun to deal with writing issues by organising a two-day mid-year thesis writing workshop because, as she said, 'obviously, it's part of my whole interest in trying to get our students to develop their writing better' (D1.1, 182). She had therefore also invited three of the ALL advisors to address specific thesis writing topics for her 4th year workshop. Her recollections were of their contributions:

> Dr. CH came and gave an hour's introduction on what is research – and Dr. JM did an hour on literature review and discussion sections in theses, and what they are, and how to write a good one [...] and also, Dr. BW, he came and gave a session on [...] coherence within paragraphs and coherence between paragraphs (D1.1, 186 - 190).

The Lecturer's initial concern for her 2nd Year students in 2011 was based on an evaluation of her previous year students' disappointing performance which she attributed to their lack of engagement with technical course content from the beginning of the semester. She explained why students' engagement with the course from the very beginning was crucial for the geoscience she was teaching:

> … the way that the course is structured, they get a different module in each week of the course – which grows in scale from very small, microscopic scale in the first week, through to kind of earth-scale, geologic basins in the final week (D1.1, 9).

She wanted her students 'to integrate the different aspects' of the course and build their

technical knowledge from the beginning of the semester. It was her participation in the AALD workshop within the TaU course that ‘sparked off’ her idea that the introduction of academic literacy development based on harvesting language from academic writing models would neatly serve her own multiple purposes towards promoting student learning.

A marked commitment to promoting student learning was evident in SL-1’s descriptions of her prior learning and teaching experience and her adoption of the AALD. Evidence of personal attributes of empathy, fairness and equity, and a scholarly approach to the practice of learning and teaching recurred a number of times during her discussions with the author.

SL1’s other subtheme for ‘Conditions’ was ‘Personal attributes’ and these were four traits that seemed vital motivations for her initial and ongoing engagement with the AALD self-help tool, a commitment to student learning, demonstrated in qualities of empathy, fairness, equity, and a scholarly approach to assessment.

5.1.3. Attributes Commitment to student learning:

5.1.3.1 Empathy. The lecturer had developed an understanding from her prior learning and teaching experience that ‘most engineering students hate writing’ (D1.1, 59) and that some might have taken steps in the past to avoid so-called language-rich courses, opting for science-based ones instead.

In introducing the first AALD session to her 2014 class the Lecturer explained her reason for using curriculum time and effort to promote their engagement with the literacy of their discipline, taking care, however, to avoid the term ‘hate’ which she used in the interview. It was a verbal strategy to ensure her message was inclusive and to guard against alienating those who might not have shared the writing aversion. The

'sales pitch' (D1.1, 79) taken from the Lecturer's 2014 AALD Workshop-1 recording illustrates the Lecturer's alignment with the students' concerns:

> The main reason is that it is widely recognized in Australia and internationally, that engineers don't really like writing, in fact scientists and engineers - in fact [chuckles] anyone who likes science and technology and engineering - tends not to like writing very much, and because of that we tend not to be very good at it. We leave it to the last minute, or we avoid thinking about it. But, as a professional – engineer – it's really important that we are able to write effectively and produce written documents and reports to hand over to your managers and supervisors, that communicate the message that you want to communicate, and to do that efficiently and concisely, and in a way that doesn't send the person reading it to sleep (D1.2c, 13: AALD 2014 Workshop-1 online recording). APPENDIX B1.2

By including herself among the people who 'tend not to be very good at it [and] leave it to the last minute', the lecturer presented a united front with her students. Nevertheless, she invoked persuasive reasons for the importance of developing the language for clarity in communicating their ideas in their professional careers as engineers, while allaying their fears, and mitigating potential resistance of those who were, or believed they were already competent communicators. Explaining the AALD in the first session of her 2014 class, she summarised the purpose and benefit of learning how to accelerate their own context-specific literacy development:

> So some of the things I'm going to be introducing you to in these workshops, some of you may have thought of that already, [but] some of you most probably won't have done. And I'm certain that the sort of things that those of us who have studied for many years […] and have gone on to the workplace, and had to do a lot of writing, have kind of accidentally figured out how to do this efficiently. This is all about telling you about the ways we do this efficiently now, so that you guys don't have to get it through that process of accidentally figuring it out for yourself (D1.2c, 11: AALD 2014 Workshop-1 recording).

Linked to her capacity for empathy with her students was the lecturer's sense of

fairness. In the example above, while she delivered the hard news that her students would be engaging in an activity that they might not like very much, she softened the message by a promise that she would help to empower them so that they would be spared the hard work of working it out for themselves.

5.1.3.2. Fairness. In another example, the lecturer explained during the interview conducted post-2014 AALD that she had previously not included academic readings in the 2nd Year students learning requirements in order to be fair to her students:

> I am teaching them a geology subject area and they're not geologists, they're engineers. So it would be unfair to give them lots of technical articles to read, because they don't have the background skills and training […] for it not to be really difficult for most of them (D1.1, 304).

Similarly, she expressed her view that it would be 'pretty unfair' that 4th year students should have to write a thesis without proper induction into the language and literacy of research:

> We can't just suddenly expect them to write a thesis if we haven't shown them how to do it, and with engineers, I think there's the danger, that – they get even less writing exposure than scientists do [chuckles] (D1.1, 326).

Her sense of fairness led her to organise thesis writing workshop for her 4th year Honours students. It also made her receptive to adopting the AALD for her 2nd Year students. It was her expectation that a more developmental learning approach, beginning early in their university studies would ensure more equitable opportunities for academic language development for all her students.

***5.1.3.3. Equity*.** The lecturer held the view that students required an appropriate incentive to help them overcome their writing aversion, and that an equitable incentive would be a judicious use of curriculum time. She knew that the integration of academic

writing development into the overall curriculum involved more than simply setting a literacy-focused assignment, that it also had to include literacy in the explicit learning objectives, learning and teaching activities and individual practice with formative feedback, and a summative assessment be judged against literacy criteria. She also knew that the assessment percentage needed to be substantial, in order to indicate to students that their academic literacy development was a valued aspect of their course:

> I made it 15% of the final mark of the course, […] I knew that […] if they are engineers, that most of them hate writing, that they wouldn't actually put the effort in it if it wasn't something I would be directly assessing them on (D1.1, 57-59).

Nevertheless, the Lecturer was concerned that she was taking a risk in the implementation with a high-stake assessment for an area that was still commonly considered to be among so-called 'soft skills', based on a view of learning that perpetuates the separation of language from discipline content. Inserting the AALD into the Geology curriculum was a bold move by the Lecturer that could have had unwelcome consequences, had her students condemned the use of discipline content time for a literacy focus in their anonymous responses to the Student Experience of Learning and Teaching (SELT) survey. She was simply relieved that there was no mention of the AALD and took this as tacit approval (D1.1)

5.1.3.4. Equity **Scholarly approach to assessment.** The lecturer knew the power of assessment for engaging students with tasks which were foreign to their usual ways of learning, by drawing on her own prior experience of learning and teaching. In addition, the 2011 Teaching at University course (which she had attended) promoted the Scholarship of Learning and Teaching in which the role of both formative and summative assessment for student motivation on the one hand and learning development on the other had been a major topic.

Summary: Context and Conditions Phase-1. The STEM lecturer's decision to adopt the AALD into her 2nd Year curriculum seemed to occur mainly because of a brief half hour workshop on harvesting language in the TaU course. However, the timing was a crucial factor, as was her commitment to actively supporting student learning. In the process of teaching the 2nd Year course for the first time in the previous year she had identified her students' lack of early engagement with course content as detrimental to their learning. In her thesis supervision of 4th year (Honours level) students she was wrestling with ways of bringing their thesis writing skills up to an acceptable level. It was thanks to the timing of her teaching commitments, as well as the timing of the AALD workshop, that this lecturer had the opportunity to make the connection between her undergraduate students and her 4th Year thesis writers. She had two problems to solve, and she determined that the AALD tool held promise of solving both.

5.1.2 Collaboration and Autonomy

The second pair of Etic themes for Phase 1 concerns collaboration and autonomy, and this section addresses the question:

> SL-1 Q2: How was the SL-1 inducted into the AALD conceptual self-help framework of genre analysis for harvesting language and how did she contribute to its development? (COLLABORATION AND AUTONOMY)

The AALD approach originated as a simple tool by which the ALL adviser could help undergraduate students understand the nature and purpose of research writing, and how learners could help themselves to accelerate their own ability to write like researchers. The AALD pedagogy, on the other hand, was jointly developed for the STEM-Lecturer to make use of the AALD tool as an integral part of a mainstream curriculum.

The Lecturer recalled key aspects of the 2011 collaboration in the interview at the end

of 2014, after completing her three years of teaching the AALD Module on her own (D1.1). The analysis of that collaboration divides into two parts: co-design of the pedagogy and co-teaching.

Table 5.1.3 Collaboration and Autonomy in Phase 1 (2011 & 2014)

THEME (**etic)**	Sub-themes **(emic)**	Evidence	Data sources
COLLABORATION	2011 CO-DESIGN: AALD PEDAGOGY	- Learning objectives - Preparation: division of labour - AALD Criteria for model articles	D1.1 (SL-1 2014) D1.3 (AALD 2011)
	2011 CO-TEACHING: AALD SESSIONS 1-4	- Interactivity ALL Adviser & Lecturer-1	D1.1 (SL-1 2014) D1.3 (AALD 2011)
AUTONOMY	2014 INDEPENDENCE 2014 DEPENDENCE	- Independent modifications - Uncertainties: renewed dependence	D1.1 (SL-1 2014) [2014 SL-1 call]

The themes of collaboration and autonomy reveal the practicalities of co-designing and co-teaching the AALD approach, as well as facets of the collaborators' activities and insights that indicated the STEM Lecturer's progress from learner towards teacher autonomy.

This section deals with two subthemes for COLLABORATION and two subthemes for AUTONOMY evident in Phase 1. Three sets of evidence were determined for the emic subtheme of co-design of the AALD pedagogy 2011: Learning objectives, Preparation: division of labour, AALD Criteria for model articles.

One set of evidence was determined for the emic subtheme of 2011: co-teaching of AALD sessions, and this concerns interactivity between adviser and discipline lecturer.

5.1.2.1 Learning objectives. The success of co-designing the pedagogy depended primarily on the compatibility of the key learning objectives of the two parties, yet at the

beginning there was a clear difference between them. The Lecturer's initial concern was to ensure her students would engage with the content of her geoscience subject from the very start of the course, while the ALL-Adviser's objective was to motivate the Lecturer to engage in teaching her students how to read and deconstruct academic texts and use them as models for their own writing. However, there was also a considerable overlap in the collaborators' objectives, since the AALD's language focus on research writing triggered the Lecturer's hopeful expectation that the second-year students would be better prepared for the research writing required for their Honours theses two years later.

Co-designing the pedagogy also required an appropriate division of labour in the preparation so that each party would contribute from her own perspective and expertise to ensure that the approach to teaching the AALD was tailored to the specific learning context for the Lecturer's second-year undergraduate class.

***5.1.2.2. Preparation: Division of labour*.** To start planning for the AALD integration in 2011, the Lecturer and Adviser agreed there would be just four teaching hours. These were spread over several weeks, and significantly, they were scheduled as an integral part of the lecture timetable. The collaborators also agreed that the AALD sessions would be conducted as a whole class group, with workshop-style interactivity, led by the ALL Adviser. However, while the Adviser took responsibility for preparing the four lesson plans and resources, the Lecturer took care of the organisational details. She had gained the necessary approval from the head of the school and dealt with administrative responsibility of modifications to the course profile and class schedule for integrating four AALD sessions of one hour each into her core curriculum.

The Lecturer set an essay assignment on a topic that required students to engage specifically with the technical content of the first four weeks of her lectures. She designed the timing of the four AALD workshop modules to allow sufficient time

between sessions for students individually to apply the key messages from the AALD session to three stages of planning the structure of their assignment. She allocated 15% of the total score for the Semester-long subject and set small homework tasks after each of the first three sessions (D1.2a, 56). Students were given the option to submit the homework tasks and receive written feedback before their next workshop. Importantly, the Lecturer decided not simply to attend the AALD workshops, but also agreed with the Adviser to participate, and co-teach in all four sessions (D1.1, SL-1 Interview, 33).

The ALL advisor prepared the learning objectives and lesson plans, worksheets and learning activities for each of the four AALD workshops. She asked the Lecturer to provide her with two academic articles to be used as the model texts from which to construct the worksheets. These were designed to support a systematic introduction into a process of genre analysis. The students were to apply the outcomes of the joint genre analysis activities of the workshops to structuring their own assignments.

***5.1.2.*3 The AALD Criteria For Choice Of Model Articles.** The Lecturer succeeded in locating two model articles required for the workshop activities. The search had not been easy, but the journal articles she located did fulfil the two principal AALD criteria: (1) that the topic should be relevant to the immediate course content, and (2) that they should be appropriately structured and written according to the requirements of academic language, citing and referencing conventions of their discipline. The Lecturer's role in locating articles that were immediately relevant to the course content was central to the success of the joint construction of the AALD curriculum and provided a solid footing for her role as co-teacher.

***5.1.2.*4 Interactivity between Adviser and Discipline Lecturer**. Co-teaching became one of the fundamental characteristics of the integrated AALD pedagogy, as it was

jointly developed in 2011 by the Adviser and the STEM lecturer. They shared responsibilities by interacting with each other and the students. They thus experientially intertwined the learning and teaching of language and technical content into a single knowledge building event for the students. While the linguistic content was manifestly led by the ALL Advisor, the collaborators agreed that the workshops would be conducted by a semi-structured turn-taking approach. This produced a conversation-style of co-teaching, where each would pick up from the other when they saw a need. In 2014, the STEM lecturer recalled:

> I guess one of my key memories is that the section that you would be leading – often […] I would be able to pick up about when they were getting confused about something technical, or specific technical words that were slightly different maybe to the ones I'd used in the class beforehand […]
> So I was able to – jump in – and I'd actually talk about technical aspects of the course that were being brought out through that model text that I'd selected for that very reason. (D1.1, 33-34)

In introducing the ALL advisor to the class, not as 'guest speaker' but a co-teacher for the session, and by taking turns so that linguistic insights were related directly back to the technical content topic, the Lecturer reinforced her message that the AALD was not an add-on 'skill' that was considered in some sense to be 'softer' or less rigorous than the 'hard' disciplines of the sciences. By her active presence in all four sessions, as well as by the high-stake assignment she had set, and the energy with which she presented the academic literacy focus as integral to her curriculum, the Lecturer demonstrated the high value she placed on the position of the discipline-specific literacy in her students' process of building the technical knowledge of their course. The STEM Lecturer's expertise in her discipline knowledge was her initial contribution as co-teacher in the 2011 development of the AALD pedagogy. A further contribution was her understanding of the industry's demands, the employers' expectations of graduates and, from her personal experience, an awareness of her students' likely

learning interests and aversions. She was confident that she was needed in the classroom:

> Basically, I guess – that's actually one of the things that I think is so crucial about the fact that this [was] a collaboration, so I think if you had been running this with the students, without me being in there, or me being able to give input, they wouldn't have been engaged or motivated at all [D1.1, 52]

She was also clear that her students needed the authority of the discipline lecturer. She had concluded that 'it was actually one of the things that […] is so crucial about the fact that this was a collaboration', that she was able to be present in the sessions: and 'able to give input':

> I think they needed me – to be able to sell it to them, that as […] engineers, [that] this is why they need to care about their academic literacy and writing skills [54] … So to be able to talk to them about what employers of […] engineers tell us about graduate attributes, and [...] the fact that graduate […] engineers have to write reports, and they need to be well written and succinct and all those sorts of things, and I think that needed to come from me, to sell that to them (D1.1, 55).

The STEM lecturer acknowledged her initial dependence on the linguistic knowledge contributed by the literacy adviser to the pedagogy:

> But I would say that in terms of the collaborative design, it just wouldn't have been possible for me to do this on my own. It needed your input, to pull that together in that format. [D1.1, 27]

She underlined the importance of the collaboration as a means for her own learning:

> I mean basically it would have been a very different thing if it hadn't been collaborative. I would not have put such a comprehensive set of workshops together on my own. Absolutely no way (D1.1, 22).

The Lecturer appreciated the Adviser's contribution of linguistic expertise with an approach that was adapted from the Systemic Functional Linguistics-based method of deconstructing a reading from a specific genre on which the AALD self-help tool for students was based:

> And I think particularly, you - you did a huge amount of work in – ahm – extracting kind of themes of analysis from the key texts; and extracting material from those to put the worksheets together.
>
> My brain doesn't work like that. I wouldn't have (laughs) I wouldn't have done something in that format at all – so it's kind of – I guess it's kind of hard to imagine what I would have done if I was doing it on my own, but I know for sure that it wouldn't have been anything like that.
>
> Yes, it would have been much less sophisticated [laughs] and I guess, a lot less interactive as well (D1.1, 23-25)

It was the experience of co-constructing the AALD curriculum and taking her place in co-teaching with the Adviser that prepared the ground for the STEM Lecturer to make the method her own and develop the confidence for autonomously adjusting and further developing the AALD approach in the years that followed.

AUTONOMY	2014 INDEPENDENCE 2014 DEPENDENCE	- Independent modifications - Uncertainties: further dependence

From the etic theme of AUTONOMY emerged two emic subthemes of 2014, independence and 2014 dependence, with evidence relating to independent modifications and uncertainties: further dependence.

5.1.2.5 Independent Modifications. It was an early decision by the STEM Lecturer to be present at all four workshop sessions. Importantly, it was also her decision to be seen to drive the AALD program, even as she was experiencing how it might function. Her attitude matched the Adviser's original intent. By co-teaching with the Adviser, she had the opportunity to observe and engage with language learning and teaching

activities which were new to her. In the three years 2012-2014 the Lecturer made a number of changes, while retaining essential features of the AALD concept. For example, she made PowerPoint presentations for introducing the sessions and included additional excerpts from different model papers to extend the information of the worksheets of 2011. As she recalled:

> Actually one of the things I changed, we didn't have PowerPoint slides in the first year, and I have put some PowerPoint slides together, and things like when we're talking about the structure of an introduction, I've actually got examples of an introduction from a bunch of papers, that are also from […] engineering-specific papers – rather than the science papers that I'm using as model texts in the course – so I developed […] a few of those things as well to make it a bit easier [..] but having the worksheets definitely meant that it wasn't difficult for me to use that again [D1.1, 114-115]

The Lecturer also improved the assessment rubric for the essay assignment 'to make it more comprehensive' (D1.1, 79). She made constructive modifications to the worksheets and lesson plans, reducing the length of the original worksheets. She took particular care when introducing the AALD in the first session. The Adviser's 'icebreaker' activity (2011) drew out the students' dislike of academic writing. As the numbers increased from 2012 to 2014, the lecturer replaced this activity by a carefully staged 'sales pitch' (D1.1, 91), designed as a detailed introduction to explain the purpose, value and process of the four AALD workshops and the associated high stakes assignment. This introduction was designed to motivate students to think ahead to their future professional employment. It was also to reassure students that they were about to receive a great deal of support in learning how to read scholarly texts and use their readings as models for their assignment.

The Lecturer's initiative to use one of the Adviser's (2011) worksheets as a model for introducing segments from her students' alternative discipline, course was a part. This signalled her readiness to adapt the resources to different contexts. In doing this she

also introduced learners to a vital aspect for the AALD tool: that the analytic approach to using course readings as models for their own writing could also be applied in other disciplines and in workplace contexts. It is an aspect that was not explicitly addressed in the basic four-part introduction of 2011, but the Lecturer's initiative indicated her capacity and potential to develop further resources or even follow-up developmental sessions for her students' other concurrent or consecutive courses.

In this context, the Lecturer demonstrated working autonomously. She adopted the Adviser's strategies and melded them with her own experience of learning and teaching, thereby adapting them to a teaching style that suited her own style of motivating her students. In the process of modifying the AALD teaching strategy, she also gained the confidence to construct additional resources patterned on the AALD's self-help genre analysis approach. However, she also critically evaluated her own engagement with the pedagogy; and when she identified a point of uncertainty, she sought clarification in discussion with the Adviser.

> *(Note: The meeting called by SL-1 with the Adviser / author midway through the 2014 teaching semester, although recorded, was not formally part of the data set as it took place too late for the ethics approval process: see D5.1.2).*

***5.1.2.*6 Return To Dependence: Some Uncertainties.** One of the changes that had occurred in her teaching and gave the Lecturer cause for concern was the absence of interactivity in her AALD sessions. In a meeting which she organised with the Adviser (in 2014, after the second of the AALD sessions), the Lecturer stated that she believed she had 'covered everything' in thirty minutes and wondered what she might have left out. In the interview after the end of the Semester she acknowledged that:

> … the workshops aren't so much workshops, more interactive lectures now, and that they're not taking as long as a result, so that instead of taking a full hour now they might be only 30-minute sessions [D1.1, 80].

The Lecturer had also discovered the use of electronic ‘clickers’, which she described as ‘digital anonymous student response devices’ to be used in the classroom for obtaining instantaneous information on aspects of students’ understanding of content [D1.1, 83]. The use of clickers had the effect of alerting her to technical content which she judged needed further explanation:

> And that's completely blown out some of my teaching, because there’ve been a few things – every year there’s a few things that they don't understand – that I wouldn't have realised otherwise that they didn't understand, so that's had to take more time in the class to talk through that particular thing and explain it (D1.1, 85)

In addition, the class size for her course had increased from around 20 to 55 students in the three years since the initial collaboration, a number which she judged to be too large for engaging students in interactive learning activities. These three factors, the reduction of interactivity in the AALD sessions, the growth in student numbers, and the use of ‘clickers’ reduced time she spent on the AALD session and were the cause of uncertainty that indicated a return to dependence on interaction with others. In this instance, the Lecturer met with the author to clarify and develop her thinking about the issue. At other times, to gain new insights and enable further autonomous actions a teacher-as-learner might also, at this point, turn to immediate colleagues in the first instance, or to ASD advisors, or they might draw on the expertise of researchers in the published research literature on higher education.

The need to seek advice indicated SL-1’s brief return to ‘dependence’ as an instance that illustrates meaning of the ‘autonomy’ loop of the RSD, whereby learner temporarily become dependent on further guidance as they deal with issues at more sophisticated levels. An exchange of ideas around ‘clickers’ (Sevian & Robinson, 2011) could raise the idea of planning, in advance, to utilise their potential as a method for initiating

interactive classroom discussion. Rather than diverting from the literacy focus, the use of clickers would be harnessed to progress the purpose of the of the AALD workshop. It is, similarly to the RSD 'autonomy loop', an example in action of the potential for the 'spiral development' (Bruner, 1960) of the teacher's autonomy, as she takes steps to consolidate and extend her knowledge and her teaching practices.

5.1.3 AALD Pedagogy and Engaging Students

The third pair of etic themes for Phase 1 concerns AALD pedagogy and engaging students. It addresses the question:

> SL-1 Q3: What evidence of learner engagement with the AALD pedagogy was identified by SL-1? (AALD PEDAGOGY AND LEARNER ENGAGEMENT)

The themes of AALD PEDAGOGY AND STUDENT ENGAGEMENT reveal SL-1's engagement with key elements of the AALD pedagogy and her students' participation in the curriculum-integrated academic literacy activities.

This section deals with three emic subthemes for AALD pedagogy and two for engaging students evident in Phase 1. Three sets of evidence were determined for the emic subtheme of AALD PEDAGOGY. These were Reading, Writing, and Assessment The 'joint analysis in the classroom of sections of two academic articles as models of reading for writing was demonstrated step by step in four sets of worksheets. The worksheets were designed to take students systematically through the genre analysis process of isolating the structures of the two articles that served as models. Structures and the associated word choices were identified successively at discourse, paragraph, and sentence levels.

Figure 5.1.3 AALD Pedagogy and Engaging Students

THEME (**etic)**	Sub-themes **(emic)**	Evidence	Data sources
AALD PEDAGOGY	READING	- issues: reading avoidance - reading: genre analysis (Worksheets)	D1.1 D1.2c Phase-1 recording: Appendix B1.2
	WRITING	- rationale for the essay - expectations of students' engagement	
	ASSESSMENT	- extrinsic & intrinsic motivation (%) - formative assessment HW feedback - scaffolding: use of assessment rubric	
ENGAGING STUDENTS	PARTICIPATION	- 'knuckle down'	D1.1
	OUTCOMES	- learning: content & writing - harvesting language - academic integrity – referencing	

5.1.3.1 Issue: Reading Avoidance. The lecturer identified the two key elements of the AALD pedagogy as she had independently practised it with her 2nd year STEM class. The first was reading analysis for the purpose of highlighting the academic literacy aspects of their content learning. The second element was the need for summative assessment to motivate reluctant students to engage, and thereby providing an avenue for scaffolding students' academic literacy development. When asked for her impression of how much reading of academic texts that students were doing, the Lecturer expanded on her earlier statements in the interview. She believed students would not engage in academic reading unless they were 'forced']:

> I would say that most students in this discipline are not reading widely of their own accord. I would suggest that they are only reading the material if they are being told that they should, by the course lecturer. So if they're being provided with reading materials, or told you need to look at such a text – and I think the majority of my colleagues in this discipline do that […] there's definitely an expectation of our students throughout their degree programs that they read, but

> I think that students are only doing that when they really have to. [D1.1, 274]

The Lecturer was teaching a science course within an engineering degree. She therefore would not expect her students to read academic articles in her own discipline, to avoid confusing them, because the discourse and practices between the two disciplines were ‘very different’ [D1.1, 282]. She had relied on textbooks and worksheets for backing up content information provided in lecture slide presentations and worksheets [D1.1, 288, 203].

***5.1.3.2 Reading: Genre Analysis*.** Nevertheless, for the lecturer teaching second-year students, the foundation of the AALD pedagogy was the scaffolded analysis of readings:

> I think with the second-years, they've probably never broken down or analysed a piece of writing before, or what's involved, and I would imagine that the majority of them, especially scientists and engineers, haven't thought about it in that way [D1.1, 213]. [...] So I think that [in] the introduction is something that I do emphasise that […] in their own writing it is […] quite an important thing to get the structure right, and then obviously – looking at actually how to structure a sentence [D1.1, 224]

***5.1.3.3 Writing: Rationale for the AALD Essay*.** During the first of the four AALD Workshops, the Lecturer set out the rationale for the integrated AALD Module and her expectations of the students’ engagement in writing the essay (D1.2c transcript of introduction to first AALD workshop 2014).

The Lecturer’s explanation of her objectives in setting the essay included both to provide support for speeding up her students’ development of academic reading and writing skills, and to alert them to the usefulness of becoming competent writers in their undergraduate and Honours years and in their future workplaces:

> The main objective of these workshops […] is to give you a few tips and tricks

> and methods that will help you to be better at reading academic texts, if that's something that you're not so comfortable with at the moment, because you may not have done a lot of that just now, and also writing in an academic style. So this is all about getting your writing skills on a track for improvement, and doing that as quickly as possible. (D1.2c, 10).

She pointed out that traditionally learners in higher education might have absorbed the writing styles from extensive reading within the research literature over an extended timeframe, but that there were also ways, not only of accelerating the learning process during their studies, but also to have the knowledge on how to do this deliberately in new and different workplace situations.

> So some of the things I'm going to be introducing you to in these workshops [...] are the sort of things that those of us who've studied for years and years, and you go into the workplace, and have to do loads of writing, you kind of accidentally figure out how to do it efficiently. This is all about telling you the ways that we do it efficiently now, so that you guys don't have to get it through that process of accidentally figuring it out for yourselves (D1.2c,12).

In case the usefulness of being competent writers in readiness for their eventual employment as graduate engineers seemed too remote to her second-year students, the Lecturer reminded them of the impending Honours research project, looming just two years away, by a humorously ironical appeal to their good will to lighten her own load:

> And I guess if your careers are feeling like they're a little bit far away, then one of my selfish motivations for wanting you to develop this a few years ago, when I started teaching here, it drove me mental when I had to read drafts of Honours theses, because some of them were just totally rubbish. It's really hard (chuckling), being a supervisor, and having to read really bad writing, and having to help those students do better. - So my selfish motivation to doing these workshops in this course [is] that the quality of your writing by that point is going to be better, so you'll do better, at the end of the day, in your Honours project (D1.2c, 15-16).

To foster students' engagement with course content from the very start of the semester, this is when she introduced the essay title, together with her expectations.

5.1.3.4 Lecturer's Expectation: Student Engagement. The Lecturer instructed the students that she did not want 'massive' amounts of information, but wanted the essays to be 'short', 'well written' and 'the content to be good. She introduced the 'absolute' requirement of including references, while also allaying students' likely concerns, by indicating there would be support within the AALD workshops for learning how to write with reference to sources, that is, 'to other peoples' work':

> So one of the aspects we have to talk about [is] how to reference other peoples' work. Because often that's something that is a little bit confusing for people who haven't done a lot of that before, and you're probably sitting there, maybe worrying a little bit about getting inadvertently caught for plagiarising, even if you didn't mean to, so we're going to talk about how you can make sure you don't plagiarise, and how you can properly cite information in the way we expect you to do, at university. There [are] some examples on how to reference but you don't have to worry about that just now, we will talk more about that later on [...] (D1.2c,19).
>
> So you'll see when we look at the assessment criteria later, if you're not comfortable with reading lots of material outside of the material and provided you don't have to [...] So for some of you who may be finding this a bit difficult in the next few weeks, and you find that it's all you can do is to focus on some of the stuff I'm teaching you in the next few weeks in the lectures and go through the lecture notes, that is perfectly fine. You can pass this assignment by just referencing the materials we are providing in the lecture notes and the lecture slides. [...] (D2.2c, 20)
>
> But for those of you who want to get a better grade, and there are going to be quite a few of you in this room, I imagine, I'm going to be looking for referencing published articles or textbooks – and - more of those for a higher mark. (D2.2c, 20)

The lengthy quote here demonstrates a point made earlier: her empathy with students,

potentially their fear of inadvertent plagiarism, and a sense of being overwhelmed by the amount of new information. The lecturer meets these with reassurances. Learners may opt to work at the most basic level for a pass or they may be encouraged to be bold and meet the challenge of new work.

5.1.3.5 Assessment: Extrinsic and Intrinsic Motivation. In the first AALD workshop session, the Lecturer introduced the 'assessment rubric', which was re-visited in later sessions:

> So, each of the columns is a 'grade descriptor', and each of the rows is a different aspect - so don't freak out it's not different aspects of the thesis, it's aspects of the assignment. I've obviously based it on that one of the things I mentioned on MyUni [the university's learning management system] I've based some of these comments on similar aspects that we assess when we are assessing your theses. But don't worry, I've toned it down, I'm not expecting you to hand something that is of the same standard as an Honours thesis this piece of work.

The lecturer's decision to allot 15% of the total value for her Semester length course to the grading of the essay was designed to ensure the commitment by that any disaffected students. Drawing on and Ryan and Deci's terminology, students who are not *intrinsically* motivated to engage would be *extrinsically* motivated by the lure of a 'separable outcome', that is to gain a high grade (Ryan & Deci, 2000). For others, who sense the Lecturer's caring approach, the attempt at new learning might be motivated 'simply for the enjoyment of the activity itself'.

The high value of 15% allocated to the literacy assignment served to motivate students to engage, initially because of self-interest:

> I guess that goes back to the whole – motivating students to do it. So – I knew they wouldn't do it if it wasn't an important part of their course assessment [D1.1, 51].

There was also the example set by their teacher who was recognised by her students as the authority in the area of discipline content:

> That's kind of the sales pitch. It's what I give them at the beginning is to convince them that it is something that's valued, [D1.1, 269]

5.1.3.6 Assessment Rubric as Scaffolding. An assessment rubric, detailing the percentages allocated to aspects of academic literacy and technical content was used by the lecturer to 'feed-forward'. While content had a place in the assessment [D1, 59] it was given just one quarter of the 15% allocated for the essay, with three quarters of the marks distributed across aspects of academic literacy.

The learning objectives had been outlined in the first session:

> So I guess a big part of it, with the four workshops – and the assessment, it's all integrated, so, as well as understanding why it's important to the careers, as well as training - you know - in preparation to doing the Honours thesis in 4th year – I'm also kind of telling them [...] whilst I'm giving them this written assignment to do, when they don't like writing, that's worth 15% of the course, I'm going to help them as much as possible to get there by running the workshops, and by giving them the opportunity to hand in bits of material for feedback and I think they all appreciate that and can see that I'm giving them something that's going to benefit them in the long run [D1.1, 100-102]

5.1.3.7 Formative assessment – homework tasks. A small homework task after the second and third workshop sessions was designed to help students in planning the structure and language. Submitting these tasks for individual feedback was optional. The Lecturer provided copious hand-written feedback in 2011 but thereafter turned to semi-automated electronic approaches.

ENGAGING STUDENTS	PARTICIPATION OUTCOMES	- 'knuckle down' - learning: through writing - harvesting language - academic integrity – plagiarism	D1.1

From the etic theme of ENGAGING STUDENTS, two sets of evidence emerged for the emic sub-themes of PARTICIPATION and OUTCOMES, yielding a total of four evidence items: 'knuckle down', (for participation), learning though writing, 'harvesting language', and academic integrity-referencing (for OUTCOMES)

5.1.3.8 'knuckle down'. The Lecturer believed the AALD was helping students to engage early with the course content as she had hoped:

> And I think this really did make them knuckle down and – revise the content I taught them in those first six weeks of semester – and pull it all together and come away with a much better integrated understanding of the topic, and why it's applicable to them as […] engineers, so it's a good thing all round [D1.1, 75].

She affirmed she was satisfied with her students' learning outcomes:

> yeah, absolutely – it's – generally there were many nodding heads and students are pleased that I'm identifying something that's a problem for graduates in their field […] and trying to help them develop that from earlier in their degree rather than just hitting them with something later on, and there's usually quite a lot of head nodding going on in those sessions in class time, and so, I think so – […] and they've certainly put the effort in with the assessment [...] I've been really impressed with the quality of work they've been handing in, and I think they've really put time in to putting some good pieces of work together […] so yeah, I'm very satisfied with their engagement – [D1.1, 121 – 124]

5.1.3.9 Outcomes: content learning through writing, and 'harvesting language'.

> The Lecturer was satisfied with her students' learning outcomes**:**
>
> Yep, oh definitely – they absolutely – as a result of having to write this assignment, they are revising – and developing a better understanding of the course content from that first half of the course, which they didn't have to do before. So I'm quite sure that's had a big impact on their learning outcomes, although again [laughs] it's very hard to know quantitatively [D1.1, 128]
> I mean there's still a range in ability to write – but I've definitely seen, because of the assessment rubric**,** because it's very explicit in terms of – you know – this much of the percent of the mark is for paragraph structure, and this is for the structure of the introduction, and this is for the structure of the overall written assignment, and because it so explicit in terms of the writing skills that I expect them to demonstrate – at different levels, then I think they're really putting effort into doing that, when they wouldn't have bothered before [D1.1, 130]

The Lecturer was unsure whether students had learnt 'harvesting language. re-used any of the language of their readings:

> Hard to answer. I would imagine some of them would, because I think – I could see [...] there'd be people nodding and [agreeing] tt this is a good idea, but it's hard to know for sure [D1.1, 170].

5.1.3.10 Plagiarism Academic Integrity And Referencing Practices. The workshops

allowed the Lecturer to deal with students' mistakes in referencing from an educative perspective:

> And referencing as well, I think, you know, they're second years, they haven't really had to do much academic reading, and referencing material [...] and again, I'm generally pretty impressed with how many of them have handled that [D1.1, 132, 135].

The workshops provided a relatively safe learning environment in which the Lecturer could scaffold the practice of citing and referencing, and deal with students' mistakes in

referencing from an educative perspective. While she was ‘pretty impressed’ with students’ generally successful handling of citing and referencing, she also had some ‘conversations’ with a few students [135].

She had set up the text-matching program Turnitin.com for students to use as a self-checking device for finding out for themselves:

> whether they've inadvertently plagiarised; and giving them the opportunity to fix that before they actually submit it to me. Very few of them actually did that, being typical students [chuckles] doing it all close to the deadline and getting it submitted at the last minute (D1.1, 154)

The use of Turnitin did result in one case where a student had re-used someone else’s previous year’s assignment. As the service compares submissions against each other, and against previous years:

> So in 2014 it was comparing against a 2014 class, and the wider literature, and also the 2013 submissions. And I did catch [chuckles] one student out who had a high degree of similarity with somebody who turned out to be his brother who did the course the year beforehand (D1.1, 156)

There were others who had ‘kind of elevated originality report scores, let's say’ among local and international students.

> There weren't any awful cases of plagiarism at all but I did have conversations with few students as a result, just to make sure that they understood what they needed to do in the future, to do things better and a couple of those, really – you know – they were diligent students, international students – they weren’t all international students (D1.1, 158)

She found ‘a couple of international students who had really put a lot of effort into trying to do the right thing’. While these were very grateful for the lecturer’s individual help on ‘what they needed to do differently in the future’ they were also ‘absolutely terrified they were getting in trouble over it’ (D1.1, 158). The Lecturer justified her response to the students’ incidents of ‘errors’ appropriately as an educational strategy, which in other areas of learning and teaching is understood as fundamental to learning:

> I explained to them that they didn't do something so terrible that that was going to happen, but that I really wanted to be sure that they knew into the future, to do the right thing – that's worked well, that's been a very nice, a good – beneficial modification in using technology [D1.1, 160].

Here the Lecturer's *cautious wording* indicates something of the constraints under which academics enact strategies for ensuring students' learning in the face of the complexity of world-wide issues of cheating, fraud, deliberate plagiarism, and alternatively, patchwriting and inadvertent plagiarism that are available to them.

5.1.4 Possibilities and challenges for learner engagement

The summary addresses Q4:

> SL-1 Q4: What possibilities and challenges were identified by SL-1 for the integration of the AALD based pedagogy into the STEM curriculum? (POSSIBILITIES AND CHALLENGES).

Lecturer SL-1 recalled that initially, in 2011, she was somewhat challenged, in line with views more widely found among academics and in some research academic literacy development, by the idea of using authentic, complex, full-size academic articles as models for students to develop their own academic literacy competence, would be a barrier to engaging undergraduate students in their early years (Wingate & Tribble, 2012).

By the end of the 2011 course, however, the lecturer's concern had clearly changed. In the three years that followed, when she continued independently to teach the same course, she maintained, and even added more examples to the two original articles. The pedagogic principle that emerged was that students could be introduced to imitating certain *parts* of the authentic article, such as the discourse structure, the

specific steps commonly used in introductions, conclusions, referencing conventions, and the 'harvesting' of typical vocabulary and phrases for re-use in their own writing. Other aspects, such as the details of the article's purpose, the data analysis and discussion would simply be passed over at this stage. (In a later course, at a more advanced level it might be the revers, and the entire focus on the analysis). The principle of a *partial* induction accords with Vygotsy's mediated learning, and Lave and Wenger's (1991) concept of learners as not yet expert members, but 'legitimate peripheral members' of a discipline they are studying.

In the third year of independently teaching the AALD approach to successive intakes the same year-level class the lecturer projected the possibility of independently extending the AALD approach into other courses. However, the possibilities for doing so within her discipline were put on hold as circumstances changed, as the Lecturer needed to take leave in 2015. She handed the AALD information and resources over to a colleague. The author sought out the opportunity to extend the case study to include the second STEM Lecturer as a 'second generation adopter' of the AALD which was accepted by both lecturers.

For Part 2 of this chapter, the naming of the first adopter of the AALD innovation may vary from 'STEM Lecturer-1, to 'Lecturer-1, or 'SL-1', and similarly for the second-generation adopter: STEM Lecturer-2, Lecturer-2 or SL-2. Phase-2 of this study concerns the induction of the second-generation adopter of the AALD pedagogy developed in Phase-1. The focus of Phase 2 is on the second STEM Lecturer who was given the role of coordinating and some teaching in the year-2 undergraduate STEM course in 2015. When STEM Lecturer-1, handed over the coordination and teaching materials to her colleague, she included the AALD timetabling, worksheets, and online postings from her 2014 curriculum. SL-2 welcomed an offer by the Adviser / author to

co-teach with her as a time-saving method for inducting her into the key elements of the AALD.

5.2 Phase-2: STEM Lecturer-2

Phase 2 of this study concerns the induction of the second-generation adopter of the AALD pedagogy developed in Phase-1. Section 5.2 has a similar structure to that of Phase 2 concerning SL2. The data for Phase-2 of this study consisted of two sets of evidence and a small supplementary set as indicated in the following Table:

Table 5.2 Data set for Phase-2

Table 5.2 Data set for Phase-2		
Item	Code	Detail
SL-2 2015 Interview transcript [continuous numbering: 1-36; 37-236]	D2.1	a) SL-2 2015 Semi-structured interview Part 1 transcript [recorded 2/09/2015] #1-36 b) SL-1 2015 Semi-structured interview Part 2 transcript [recorded 10/11/2015] #37-272
AALD 2015 Curriculum documentation	D2.2	a) AALD 2015 Workshop information on LMS (online) b) AALD 2015 Worksheets [= AALD 2014 Worksheets] (online & hard copy)
AALD 2015 *Supplementary data*	D2.3	AALD 2014 Two student interviews see Note below*
** NOTE on D2.3: Only two students out of the class of 65 presented for interviews. They are both male, each with prior tertiary study experience and are therefore not representative of the class. They are introduced peripherally for their own critical engagement with the AALD pedagogy and a perspective on the younger students' participation in the AALD.*		

Phase 2 explores the context, method, and outcomes of the second-generation adoption of the AALD pedagogy by Lecturer-2. The data for Phase 2 consist of two interviews with STEM Lecturer-2 and 2015 AALD curriculum documentation. The first interview (D2.1a), recorded after the first two sessions of co-teaching (02/09/2015), was planned as a discussion for Lecturer-2 and the Adviser to check with each other on the progress of their co-teaching. The second interview (D2.1b) was recorded at the

conclusion of Semester (November 2015) after all assignment and examination results had been finalised. The transcripts of the two recordings were segmented into short, coherent items, and numbered for easy reference. Other data accessed for Phase 2 comprised the 2015 AALD worksheets and online workshop information.

As indicated in the note in Table 5.2, although only two students out of the class of sixty-five presented for interviews, a short summary of each of the student' main point is included at the summary below. The three questions from Phase 1 (above) were adapted and applied to the second-generation adopter (STEM Lecturer-2).

5.2.1 Context and Conditions Phase-2

This section outlines the circumstances in which the implementation of the AALD pedagogy was continued into a second phase and the background of a second-generation adopter.

SL-2 Q.1: What were the circumstances, background, and personal motivations of STEM Lecturer-2 when she adopted the AALD approach in Phase-2 of this study?

Table 5.2.1 Context and Conditions – SL-2.

THEME (etic)	Sub-themes (emic)	Data evidence	Data sources
CONTEXT	CIRCUMSTANCES & BACKGROUND	- Handover of the 2nd Year course - English as her second language - Scientist, researcher, thesis supervisor	D2.1 [SL-1 2015]
CONDITIONS	MOTIVATION PERSONAL ATTRIBUTES	- Expectations initially neutral - Professional commitment student learning - Analytical approach - Empathy - Commitment	D2.1 [SL-1 2015]

5.2.1.1. Circumstances & Background: (Phase-2) Handover of 2nd Year course.

The reason why STEM Lecturer-2 became the second-generation adopter of the AALD pedagogy was simply a matter of circumstances. The AALD was part of the curriculum of the 2nd year course which she was to take over. In her words:

> The reasons that I ended up teaching – co-teaching these workshops with you – are very different from those when you originally started the workshops ... I was chosen to fill in for Dr SL-1 and take over all her teaching materials (D2.1a, 3).

The Lecturer's substantive appointment to her School Her teaching responsibilities had generally been confined to the supervision and assessment of students' theses in the 4th year (Honours) of their undergraduate program.

The first pair of the etic themes concerned the context and personal conditions that pertained in 2015.

5.2.1.2. Background: English as her second anguage. While being an academic with English as an additional language is, in itself, unremarkable in the globalised higher education context of the 21st century, it is of interest in the context of the topic of English academic language development. This Lecturer's first language is German. She had gained her university qualifications in Geoscience before arriving in Australia. While Lecturer SL-2 has a fluent command of English, it appears that her research interests had not included either theories or practices of language learning.

5.2.1.3. Scientist, Researcher, Thesis Supervisor. Nevertheless, as a scientist and research supervisor in her STEM discipline, the Lecturer had focussed her supervision

strategies on the discipline content of her students' theses. However, in working with fourth year students, she had also been concerned by poor quality in the written language and the construction the thesis texts that were produced– not only by students who were non-native English speakers (NNES) but by native English speakers (NES) as well.

> At this stage, I've always only been at the very end of things, when I start to supervise theses and I get to see the end product, at the end of [the Honours students'] four years of study, and I get to read their theses, and ... there are cases when you wish they would have had some sort of instructions early on that would have helped them … to practice their writing, so they can then include that into their thesis writing (D2.1a, 8).

As teaching in the first three years of the undergraduate courses in her School was not among the usual requirements of her position, she was unfamiliar with the undergraduate curricula of her discipline, or how much academic reading or writing had been required to be done by students during the early parts of their degree program (D2.1a, 18). She therefore had no experience of a context for a role of the AALD in her discipline's undergraduate curriculum. Moreover, time for the handover was tight, as both Lecturers were also fulfilling other research and teaching commitments. Because it was known that the ALL Adviser/ author was available to collaborate and co-teach the AALD workshops with SL-2, the handover by SL-1 with respect to the AALD was kept at the level of technicalities of the pre-existing timetabling, essay topic, assessment criteria and the AALD overview worksheets and class worksheets.

Conditions (Phase-2) The acceptance of the AALD pedagogy by Lecturer-2 was contingent both on her own motivation and growing expectations for the outcomes of the AALD, as well as on her personal attributes, such as professional commitment to her work, an analytical approach to improving student learning, and a sense of empathy with

her students' perspectives.

5.2.1.4 Motivation: Expectations initially neutral. Lecturer-2 explained during the first interview (D2.1a), recorded after being part of the first two collaborative teaching sessions, she had had 'no initial ambition' to teach writing to her students, and that she had adopted the AALD with neutral expectations, solely as part of the course that she was required to teach. However, after only two of the four AALD sessions, she indicated she had already gained an appreciation of 'what the workshop is doing' (D2.1a). The Lecturer's motivation to embrace the AALD emerged during her co-teaching presence in the workshop sessions. At this stage she formed high expectations, looking forward to gaining personal benefit from long term effects of the AALD on the students' thesis writing that she would be supervising two years later:

> So at this stage I'm really excited because I'm now seeing these students through this course, and very likely, in about two years' time I will [see] – not all of them – but some of them I will be supervising in their thesis writing; so I'm really excited to see what sort of improvement, hopefully, I can see in comparison to earlier theses I have supervised (D2.1a, 9).

The Lecturer's enthusiastic reaction to the AALD pedagogy, after the first two sessions of co-teaching, raises the question whether her high expectation of long-term outcomes of the AALD in the 2nd year curriculum for the same students' thesis writing ability in 4th year was realistic and likely to be met. (This will be addressed in the context of students' learning outcomes (in Section 5.2.3 of this chapter.

5.2.1.5. Personal attributes: Professional commitment to student learning. –

The Lecturer's motivation to commit herself to the AALD was her professionalism, meaning that she adopted and performed the work required of her with thoroughness and precision. She had accepted the AALD because 'it was part of the course and so it

was done' (D2.1b, 160). Her professionalism meant not only efficiently doing the task she was given, but also being committed to promoting student learning. For example, while she received positive feedback from students who had embraced the AALD workshops, this was offset by others who resisted engagement with the course-based focus on reading and writing. Nevertheless, during the first two co-teaching sessions the Lecturer convinced herself that the majority of the students would experience a beneficial effect from the AALD pedagogy:

> I still strongly believe, even if there's a few - and there's only a few - who think that it's not useful for them - that for the majority of the class, they will have some sort of positive [outcome] out of that (D2.1a, 14)

SL-2 found this belief confirmed after the assignments had been assessed. While it was not clear to her whether students had begun to adopt the AALD self-help tool for accelerating their own development of their stock of vocabulary, she did find, when assessing the assignment during the mid-semester break, that there had been a marked overall improvement in students' understanding of the content of the first four course modules of the STEM course.

> Actually, I wasn't aware of it when the course started. But now that I have been through the course and the whole process of the workshop, as well as the course content, what I see is that it greatly helps students understand the course content of the first four weeks. (D2.1, 39).

5.2.1.6 Analytical approach. SL-2 applied her analytical thinking to improving student learning for understanding the logic of the AALD assignment that was worth 15% of the overall course. She had initially accepted the reason why the detailed assessment rubric showed the technical content to be valued at just one-quarter of the total marks for the assignment, with three quarters of the assessment distributed across criteria related to the academically appropriate use of structure, language and referencing conventions. Nevertheless, while allocating marks according to the rubric she noted

that some papers received a higher score than their content warranted. She therefore began to doubt the wisdom of the distribution of percentages, and wondered whether the quality of content should not, after all be rated more highly. However, she recognised that she was falling back into the tradition of content-focussed assessment. Returning to the underlying learning objective for this assignment, as explicated in the assessment rubric, she reasoned:

> But then, content is looked at in other ways within the course, like in the tests when it's purely about content; that's when they can prove to me that they understand about content; that's not the main purpose [of this assignment] (D2.1, 178).

The main purpose of the workshops and the associated assignment was 'about learning how to write':

> That's when I reminded myself that content isn't the main purpose of this assignment, it's about learning how to write, and then I could convince myself again, that - yeah - even if the content wasn't so great (D2.1, 179).

As a scientist, she applied her analytical approach to the logic of learning and teaching, where the purpose of an assignment and the assessment criteria were in, what Biggs (1996) called 'constructive alignment' with the learning-teaching activities and aspired learning outcomes. She was able to arrive at a rational explanation that thereby allayed her concerns that students' performance would be falsely assessed.

***5.2.1.7 Empathy*.** The Lecturer's capacity for empathy with her students is illustrated by her reflection on her own doubts about the percentage distribution described above. She recognised a parallel between her own brief concerns with the relative weighting of the criteria and those her students were conditioned to expect.

> You know, I understand the thinking process students have, because I might have said it myself occasionally when marking [small chuckle] (D2.1, 180)

Empathy with students through having personally experienced their concerns about this issue may have been a motivating reason for the meticulous precision with which she performed the marking of the assignment and giving personal feedback to students. SL-2 had been handed three sample papers from the previous year cohort. As they had been previously graded as high, middling and low levels of performance respectively, she used these to test her own grading consistency against the assessment rubric which her colleague had constructed. She spent this time in practising grading to ensure to be fair to all the students that she would look at each one of assignment, 'in the same way' (D2.1b, D132).

SL-2 found empathy of another kind in relation to learners who, like she herself, were not native speakers of English:

> So I think some of them that are not native speakers, at least, when they realise that I am also not a native speaker, that once they realise that, I think that kind of … I'm not that different [from] them … that at some stage I was in their shoes, maybe, I just think that, for some of them at least, it made the whole thing a bit more effective (D2.1, 213).

She sensed a mutual empathy, and that students who were non-native English speakers, might perceive her as a role model, realising that their teacher would also have, at some time, experienced some of their own current language issues. Although she may not have previously engaged directly in theoretical perspectives on language learning or teaching, her practical experience of mastery of languages was likely a factor that served her well in understanding and adopting the AALD tool into her learning and teaching armoury.

5.2.2 Collaboration and Autonomy

Q2 How was SL-2 inducted into the AALD conceptual self-help framework of genre analysis for harvesting language and how did she contribute to its development? (COLLABORATION AND AUTONOMY)

The second pair of etic themes serves to explore how, in 2015, Lecturer-2 collaborated with the linguistic Adviser and to what extent she took independent responsibility for the implementation of the AALD.

Table 5.2.2 Collaboration and Autonomy – Phase 2, 2015 [SL-2]			
THEME (etic)	Sub-themes (emic)	Data evidence	Data sources
COLLABORATION	2015 PREPARATION & CO-TEACHING	- Division of labour - Adviser & Lecturer roles	D2.1
AUTONOMY	2015 DEPENDENCE 2015 INDEPENDENCE	- Growing recognition - Increasing independence	D2.1

5.2.2.1 Preparation and Co-teaching: division of labour*.* Initially, in preparation for taking over the STEM course, the tasks for Lecturer-2 centred on administrative aspects for ensuring that the four AALD workshop sessions were visible online to students and staff in the course-specific Learning Management System (LMS). Closer to the start of the teaching Semester, the Lecturer and the Adviser met to decide on further aspects of preparatory division of labour and their co-teaching roles.

To prepare for the co-teaching of the AALD workshops, the tasks for SL-2 were to assimilate the resources that had been most recently used by the first Lecturer and forward them to the Adviser/ author. The latter made some updating modifications to the lesson plans and worksheets and returned them to be uploaded to the LMS. The

author also watched the 2014 slide presentations by Lecturer-1 and made a partial transcript of these to guide the sequence of the first co-teaching session (D2.2).

5.2.2.2 Advisor and Lecturer Roles. There were brief planning meetings between the Lecturer and the Adviser / author where it was decided that the Lecturer would take the role of introducing the purpose of academic literacy focus within the Engineering-plus-Science curriculum. She would take her cue from the transcript of the first Lecturer's presentation for 'selling' the importance of reading and writing for students' employment, as well as for their current learning and 4th year thesis writing. Thereafter, the author would again take the lead, similarly to her 2011 co-teaching with SL-1, applying an interactive workshop approach to introducing and developing the literacy themes and activities. SL-2 updated the online course information that included the scheduling of the four AALD workshops that were integrated, as before, into the regular content teaching timetable. She also uploaded the assignment topic together with the detailed assessment rubric. In doing so, Lecturer-2 became acquainted with three of the key tenets of the AALD pedagogy that had been developed with SL-1: that the induction into the academic literacy of this discipline was a learning objective of the course; that academic literacy was assessed as an integral part of content learning; and that the assignment would be judged according to criteria that foregrounded the quality of students' written communication of their understanding of the content of the first four weeks of the course.

5.2.2.3 Growing recognition towards independence. While Lecturer-2 familiarised herself with the AALD from an organisational perspective, she also engaged with the unfamiliar theory and practice of the genre analysis approach for accelerating academic literacy development as part of the collaborative teaching. She applied her

scientific sense for detail and logical analysis, to distilling for herself the underlying principles of the practical class activities. This was evident from her descriptions of her feedback and explanations in talking to students, particularly in relation to their homework tasks and final assignment.

> I pointed out again that the assessment rubric has been available all the time, and still is online, which gives a very detailed breakdown of how the assignment was looked ~~at~~, so, even if right in the class, when I handed them back, a few students approached me: 'oh I think I was marked too harshly here and there' I talked them through, because I had all my documents with me (D2.1, 83).

5.2.2.4 Independence. *During the collaborative teaching Lecturer-2 rapidly developed a sense of the potential usefulness of the AALD tool when giving students feedback on their writing. She declared that she had already begun to use it in giving feedback to her Honours students on their writing.*

> I felt like I have a real method, like a scientific - you know I'm a scientist - I like some scientific rules I can talk them through. You know I would always talk to them about their writing, and that they should improve their writing. But I couldn't back it up with, like, a method, a scientifically proven method, or something like that. (D2.1, 157).

The Lecturer later agreed with the author that, rather than 'scientifically proven', the method was 'a tool which is has three or four steps, that are fairly easy to teach' (D2.1, 184). She recognised the underlying concept as logical and simple to apply, and useful for communicating with students:

> I mean it's not rocket science, but as I said before, for myself I could make so much use just in supervising thesis students that I think it's just a good way, it's a good method to communicate with the students (D2.1, 208).

Her recognition that the language-focus had also addressed the overall course learning objective (of an understanding of course content) developed more gradually, as part of her active involvement in the teaching of the workshops and the assessment of the

assignment:

> Actually, I wasn't aware of it when the course started. But now that I have been through the course and the whole process of the workshop, as well as the course content, what I see is that it greatly helps students understand the course content of the first four course modules (D2.1, 39).

Having finalised the assessment of assignments, she noted the curriculum focus on literacy development had contributed to the overall improvement in students' understanding of the content of the first four course modules.

The Lecturer could see herself re-applying the AALD on her own but would be hoping for opportunities for checking back with the Adviser.

> Having done it under supervision [small chuckle] kind of, here with you, I think I see myself able to do something like that, or similar, in another course… but … yes, I think I could do it myself (D2.1, 207).

While the Lecturer had not only recognised the logic of the AALD, that is, the need for students to be familiar with the academic readings of their discipline, and to use these as models for their own writing, she was also satisfied with the students' success in improving the content knowledge of the first four weeks of the discipline content course. However, she was also aware that there would be questions along the way for which she would need some further support.

The development of this Lecturer's autonomy for adopting the AALD, and making it 'her own', is traced in this section through her interview comments that indicate her movement back and forth, from dependence on the existing AALD pedagogy and resources used by the Adviser, to an increasing sense of independence. It is seen in the manner of her responses to the unfamiliar, her growing recognition of the potential of the AALD tool, her increased understanding of the conceptual underpinning of the

AALD, and a confidence towards making her own pedagogic decisions. While there was a willingness to design her own AALD worksheets and teaching strategies for a different curriculum, and a sense of having the necessary preparation to do so, she was also clear about the importance of teamwork and the availability intermittent collaborative support in the exercise of full autonomy.

SL-2 Q3 What evidence of learner engagement with the AALD pedagogy was identified by the lecturer? (AALD PEDAGOGY AND LEARNER ENGAGEMENT)

5.2.3 The third pair of etic themes Lecturer's engagement: key elements of the AALD pedagogy; and of her students' participation in the curriculum-integrated academic literacy activities [SL-2].

Table 5.2.3. AALD Pedagogy and Learner-Teacher Engagement – SL-2

THEME (etic)	Sub-themes (emic)	Data evidence	Data sources
AALD PEDAGOGY: STUDENT ENGAGEMENT	1. COURSE-INTEGRATED ASSESSMENT RUBRIC COURSE READINGS KEY ELEMENTS OF AALD	- time-table and assessment signals value - assignment 15%: signals importance - manageable: language and content - class work & set homework tasks	D2.1
LECTURER ENGAGEMENT	4. SL-2 INITIATIVES	- homework: feedback - assessment rubric: feed-forward	D2.1

5.2.3.1 Course-integrated pedagogy*.* Lecturer-2, as a 'second-generation' adopter, learnt the conceptual basis for the AALD pedagogy by active participation in its

performance. She accepted the AALD at the outset, as part of the course she had to teach, knowing that the teaching of the literacy program would be led by the Adviser/ author. However, it was the second STEM Lecturer's task to coordinate the STEM subject and therefore to put the five key elements of the AALD pedagogy in place. It meant ensuring that the AALD activities continued to be 1. course-integrated, 2. assessed, 3. use course-specific readings, 4. be interactive in class, and 5. offer feedback support for homework tasks.

5.2.3.2 Lecturer-2 Views of Student Engagement. The AALD's key elements are that it was integrated into the course timetabling. It was manageable, with just four hone-hour long workshop lessons; it addressed language in the context of the immediate content of the course. The workshops had the potential for interactive learning within the classroom and for small homework tasks for students to build their essay structure and receive. A detailed assessment rubric was used by SL-2 to 'feed-forward', by alerting students to a precise set of the expectations. Finally, to ensure all students could be motivated to engage in the preparatory work and the assignment's proportionally value (16% of the total course marks) was significant as an indicator of the value placed on raising the learners' awareness of the constitutive role of language in meaning-making and learning.

The purpose of scheduling of the AALD sessions as part of the regular course timetable was to draw attention to the AALD perspective that literacy concerns all learning and therefore to ensure equity of access. However, student attendance at the workshop sessions was consistently lower than for the more usual 'content only' classes. A proportion of students who attended the content hour took the opportunity to leave the class at the start of the literacy workshop that was scheduled for the following hour. SL-2 had not expected to find any student resistance to attending the workshops, but from the reduced numbers of students who remained for the AALD half of the

lecture time-slot she recognised that students were divided in their acceptance of the integration of literacy workshops into the course time-table. While the majority appeared to be neutral, there were some students at each of two extremes:

> When I started teaching the course this year, I didn't assume there to be any difficulties, just to make that clear. But now that I start to get feedback from the students, there's kind of mixed responses. Some of them love it, some of them don't like it, so there doesn't seem to be a real in between, just people that go with it, but not so sure if it's useful or not; it's just only the extreme ends. (D2.1a, 11)

The Lecturer heard from students who resisted attending were that they did 'not need it', that they were sufficiently prepared and knew how to read scientific papers. However, she doubted that these students had as yet been exposed to the scientific writing found in academic articles, suggesting their self-assured stance would have been based on their ability to read textbooks, while they were unaware of the genre differences between teacherly (didactic) textbooks and research-based scientific articles.

> They think they're prepared enough, they know how to read scientific papers, which I'm pretty sure they're not really, because I don't think many of them really have been exposed to real scientific writing, because many of them are fresh out of school, so they might have read books, which is very different writing to scientific publications. (D2.1a, 13)

At the other extreme, the Lecturer had received enthusiastic feedback about the AALD from some students:

> Beside the few negative comments of feedback I get, I also get positive feedback, and if I get that, it's really positive, people who tell me that they really like the approach, that they really want to apply this approach to what they have to do throughout the course and maybe other courses (D2.1a, 21).

The integration of the AALD sessions was founded on the view that literacy concerned

all learning and its development had therefore been made equitably accessible for the entire class. For some students in the middle range of acceptance of the AALD, that is, those who in the Lecturer's words would 'just go with it', the course time-tabling could be seen as an extrinsic motivator for students who were undecided or indifferent but attended the sessions simply because they were scheduled as part of the course. Lecturer-2 had maintained the timetabling of the AALD workshop sessions that had been instituted by Lecturer-1, but it was only in hindsight that she noted that the timing had a pedagogic purpose.

> Now that I can look at it from hindsight […] I think the timing of the workshops is part of the course – it suited their work, it isn't part of the difficulties, it's really part of the strengths (D2.1, 118).

Course-specific academic readings for class work & homework tasks

The Lecturer had embraced the concept of 'reading-for-writing', based on the premise that, in the university context, the reading of scientific research articles as models for students' academic writing was one of the essential conditions for students to learn how to accelerate their own academic literacy development. Problematically it has also been a neglected area of higher education. While marking the assignments, the Lecturer had noted that the majority of students cited only class materials or lecture notes, accessible on the LMS, and that those students who cited additional resources tended to refer to books rather than academic articles. She remarked that this confirmed 'exactly what we believe' (D2.1, 251), namely, that books were easier to understand and commonly used, and therefore tended to be the standard model. But the Lecturer pointed out that the academic literacy choices of phrasing, citing and referencing were not modelled well in books:

> The truth is that understanding scientific articles is a different job (D2.1, 251) … books are [...] written in a much different style than articles (252)…[and] writing

> in a book is very different and also citing is very different in a book (255)

and that the choice of curriculum-related academic articles for the construction of the AALD worksheets had been made for that very reason:

> We had given them the model articles as part of their reading list, for instance, to encourage them to look into articles and not just books. (D2.1b, 252)

She recognised that the model articles chosen for the AALD workshops could encourage students to overcome their barriers to academic reading, and serve as more appropriate models for their writing than the style of a textbook. However, lecturer and author (the latter stepping into her advisory role) agreed during the interview that, during their co-teaching, they might not have sufficiently articulated the fundamental concept of the AALD that, in order to write academically, learners needed to read academic texts. At this stage, the interview took the format of a brief discussion where both parties affirmed and further developed their understanding. The author recalled that during her collaboration with the SL-1 in 2011 (D2.2.1b, 113) she had rounded the final AALD session off with the words:

> ‘What you have just learnt now, is to do deliberately, and consciously, what we normally, over much longer period, do subconsciously, without even thinking about it; it happens, because we read a lot’ (D2.1b, 115).

The Researcher was concerned that as the adviser, she had neglected to use, or at least emphasise these words during the co-teaching sessions, to which SL-2 replied:

> I must admit, now that you say it the way you just did, although we did give them plenty of opportunity to exercise that part of re-usable language, we never really pointed out that by just reading, that helps them to just grow their ‘Wortschatz’ (literally: a ‘treasury of words!)… I wasn’t aware of it until now, (D2.1b 114),

SL-2 added that, if given another opportunity to teach that course she would ‘would probably point that part out more clearly’ (D2.1b 116)

5.3 Lecturer engagement Possibilities

The possibilities of sustaining the integration of the AALD approach into course curricula of a specific discipline will depend, at the most basic level, on the nature and extent of success achieved and satisfaction experienced by its early adopters.

5.3.1 A tool for overcoming barriers to literacy integration?

Success in overcoming student, staff and organisational resistance to curriculum-integration of academic literacy depends on the capacity of the AALD to meet the needs of each of these stakeholder groups. The lecturer's stake in the teaching of a class of Year 2 undergraduates was in promoting effective student learning. A measure of success for this lecturer was the satisfaction she derived from co-teaching, and thereby learning the AALD tool for harvesting facets of course-specific language and research writing conventions from academic readings. This method met her immediate need for a 'structured method' of providing students with constructive feedback on their written work.

On a personal level, lecturer SL2 found that her introduction to the AALD pedagogical tool had immediate consequences for her concurrent work in supervising students' 4th year Honours thesis writers. In the past, she used to exhort her thesis writers to improve their writing but lacked a method for explaining how they might go about it. As a co-teacher in the writing workshops, and assessor of the students' assignment she was actively involved in the process and built her own knowledge at the 2nd Year level, and saw the applicability in advising her thesis writers. She related times when she recognised this while reviewing her Honours students' draft theses and found that she was looking at them in a new light:

> Almost every time we had a workshop, [it] was kind of similar to the times when the Honours students had to hand in drafts of their thesis, and I would look at it

> with a completely - almost different - point of view, because I could [recognise]: 'oh - exactly what we talked about in the workshop today'. It was so much more obvious to me, the mistakes they made. (D2.1b, 122).

The new understanding, which SL-2 gained through being present and contributing during the undergraduate AALD workshops, became immediately useful in her work of advising her thesis writers. She viewed the AALD tool as a 'structured' approach that enabled her to give better advice and demonstrate to them to 'see this is what you've done' and help students to 'think better' (D2.1b, 124). She called this as '[my] main, my personal advantage'. Her insights suggest, as an additional possibility for promoting AALD, that it could explicitly serve as a model for 'personal development' as an outcome of the collaborative experience.

5.3.1.1 Future development. SL-2's confidence in herself not merely to continue using the existing materials in successive years, but to apply the approach independently to a new course, was tentative. She would need the support of an adviser:

> Especially if it would be really to a new course, and I might maybe – would like to chat about where to best include it in the course … And now, knowing that it helped them so much to understand the content, I would probably try to have somebody around at least to discuss what would be the best time, and then, in terms of percentage of time taught in the course, and then of how to best connect it with the course content (D2.1b, 187, 188).

As this lecturer's main employment had been in research rather than teaching, she was not fully acquainted with the teaching practices across the discipline. In her current role as course coordinator she had noted that there were various individual approaches by lecturers for promoting written communication:

> I know – and I've also noticed, now that I have more involvement with lecturers

> and coordinators with other courses, it's not just important to me or that course, it's important to many other lecturers too. In the way that everybody seems to try to do something around writing, I get the impression, and I think what we need to be careful of, is that we don't overdo it [slight chuckle] (D2.1b, 161).

She proposed that, while she was aware of still being 'a bit of an outsider', there was a need for some coordination to avoid alienating students with the boredom of repetition:

> I think there needs to be [a bit] of communication between course coordinators … in terms of teaching writing … because we don't want to do it over and over again. Because then that explains why some people might be bored, 'I have to listen to that again, I've done it before, I know how to do it'. It might help that attitude a bit (D2.1b, 198).

When asked whether versions of the AALD might be staged across the first three-year levels of their Engineering degree program, she repeated the organisational principle, that coordination would be needed across their discipline to determine 'at which time, and with which frequency' students would be exposed to an explicit focus on writing (D2.1b, 169).

5.3.2 Challenges to the adoption of AALD approaches into curricula.

Challenges to the adoption of AALD approaches into curricula on a broad scale will be the extent to which the stakeholders, students, staff and the institution, view the purpose of academic literacy development, and how it might serve their own purposes. A challenge for students has been a tendency among some STEM students to avoid writing (as mentioned by SL-1 in Part 1 above). For some students this attitude may stem from a belief that because they had taken a subject of 'English' in their final school year, they had no need of a course in 'language' or 'writing'. For others, whether native or non-native English speakers, it may be that their prior participation in courses on written English had left them feeling uninspired or inadequate. (D2.3). However,

convincing students of the need to develop the academic literacy of their discipline (for example, Student 1, D2.3b) is only a first step. Progress in mediated learning requires time for development and cannot rely on the introductory four workshops alone.

The challenge for academics is to provide sufficient opportunities and students to experience the insight that, in sociocultural terms learning occurs individually, depending on each learner's prior learning and interaction for mediated guidance.
The challenge experienced by both lecturers SL-1 and SL-2 is the lack of time available to do the feedback processes justice in their own estimation. SL-1 ceased overtly encouraging students to submit homework tasks in successive years as class numbers grew; and Sl-2 found a particularly time-consuming task in the preparation of the 'tick boxes' for her marking scheme, and to following the criteria set by the assessment rubric (D2.1b, 95). Nevertheless, both Lecturers aspired to continuing to include the AALD modules in the Year-2 course.

5.3.3 Phases 1 and 2: Summary and Discussion

This chapter has presented the contextual and personal circumstances that initially propelled STEM Lecturer-2 into the position of second-generation adopter of the AALD. It also provided a dynamic picture of the two STEM Lecturers' experience and perceptions of benefits and challenges of the integration of the AALD self-help tool in the year-2 STEM curriculum.
Crucial contextual factors were that the induction of both lecturers SL-1 AND SL-2 into the established AALD pedagogy occurred through collaboration and co-teaching with the author as a Literacy Adviser; and that the course-specific articles, the worksheets based on these texts, and the previous year's audio-recorded slide presentations by Lecturer-1 were available online, ready for use by the new inductee on the university's Learning Management System.

5.3.3.1 Collaboration as professional development. One short demonstration within the University's comprehensive academic staff development program in 2011 was the starting point for the prolonged curriculum-integration of a literacy development module into a core STEM curriculum at the centre of this study. The second-generation STEM Lecturer's understanding of the AALD developed as a result of co-teaching and assessing the students' assignments against literacy-weighted criteria shown in a rubric. The core of the author's original 2011 worksheets continued in use to the end of the time of data gathering for this longitudinal case study (2016) and beyond. However, both SL-1 and SL-2 modified and enriched the learning-teaching processes in accordance with to their own experience and their understanding of the essence of the AALD pedagogy. Sl-1 initially trimmed the lengthy worksheets to a manageable size, complemented the plain paper handouts with powerful PowerPoint projections, and added excerpts from other authentic academic articles to the 'deconstruction of text' process of the genre analysis strategy. SL-2 added a method for using the projections for electronically focussing students on the assessment rubric as a feed-forward technique, helping students to predict the areas where they might focus their efforts. Thus, both Lecturers continually augmented their own levels of knowledge and took the learning-teaching method to more sophisticated levels of autonomy. These are the processes that are constructed conceptually in Vygotsky's *Zone of Proximal Development,* (1935/1978) in Scardamalia and Bereiter's concept of *knowledge transforming* (1991), and in Willison's (2020) *Models of Engaged Learning and Teaching.*

Both SL-1 and SL-2 perceived beneficial effects of the AALD almost immediately and expressed this enthusiastically in the first sections of their interviews. For SL-2 this occurred after just two co-teaching sessions. She recognised a conceptual logic of a 'reading-for-writing' tool that would enable learners to accelerate their own literacy

development, and, as a STEM discipline teacher, she found the analysis of readings for modelling writing a ‘useful tool for communicating with students’. By the end of the course, SL-2 reported evidence of improvement in students’ understanding of technical content. While she was unable to judge whether there had also been improvements in students’ language choices, she found that students had begun to structure their essays, modelled on subheadings of the analysed research articles, and also to imitate the citing and referencing conventions.

5.3.3.2 Some conclusions can be drawn from the experience of Phases 1 and -2 about the possibilities for continued curriculum-integration. The context for the second-generation adoption was the opportunity for the author to extend the case study to a second-generation adopter. Lecturer-1 was committed to the retention of the AALD during her absence. For Lecturer-2 the opportunity of the role of coordinating the course in her colleague’s absence added a substantial teaching experience to her core research activities. In addition, she had an empathetic understanding of her students and a strong commitment to fostering the quality of their learning.

Continuity of the curriculum integration, over five years, was achieved by the participants of this study while the class sizes increased annually from 26 student in 2011 to 65 in 2015. Both lecturers attested to the usefulness of the AALD tool and pedagogy. In both cases their willingness to adopt and adapt the pedagogy was enabled by a combination of some propitious contextual factors on the one hand, and on the other, their personal attitudes to promoting student learning, their own understandings of students’ learning needs, their experience of positive outcomes of the AALD, and their recognition of the efficacy of promoting the growth of language knowledge as integral to the growth of content knowledge. Other factors that made it possible for the AALD approach to be continued by them were the relatively small size

of their STEM discipline program, and the availability of the Literacy Adviser for occasional supportive discussion with SL-1 and for co-teaching with SL-2 at the handover.

The case study presented here has a fragile existence at a time where continuous changes in the higher education sector are often the norm. Meeting the challenges for up-scaling literacy integration into mainstream learning and teaching in the long term may well depend on the level of interest and academic literacy awareness among middle- and senior academics in teaching and research positions across faculties and institutions. For this reason, the views of faculty staff who were not involved in the development of the AALD but who responded to invitations to share their views about the perceived levels of students' academic literacy, formed Phase 3 of the data collection for this study. An analysis of the respondents' perceptions of the place of academic literacy development in undergraduate is presented next, in Chapter 6. Their views provide a small sample of perspectives that contribute to the academic culture of a university.

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Chapter 6: Results and Analysis of Faculty Staff Views (Phase 3)

To investigate academic literacy in a broader context, Phase 3 of the 2016 data collection process solicited insights on the issue from a diverse group of Australian South Coast University (ASCU) faculty staff. Thus, this chapter explores the perceptions of staff who have had extensive academic teaching and/or administrative contact with the university's undergraduate or postgraduate coursework students. The consequent 'thick description' provides evidence that can be used to gauge aspects of the academic cultural climate of the institution in which the Accelerating Academic Literacy Development (AALD) program was integrated into a STEM curriculum (Kezar & Eckel, 2002). *This cultural climate is conceptualised as a pattern of factors that would potentially enable or impede the large-scale integration of an AALD approach into mainstream curricula.*

The Phase 3 data derive from (1) an online survey of faculty staff, (2) interviews with four faculty staff, and (3) a focus group discussion involving three members of a communication unit that was embedded in a STEM faculty to support academic literacy development in three disciplines.

The anonymous responses to the online survey provided diverse perspectives regarding academic writing, reading, and the integration of academic literacy into mainstream curricula. The interviews were conducted as 'collegial discussions' that enabled the author to probe each interviewee's conceptualisation of academic literacy in the context of their own experiences of confronting literacy-related issues in discipline-specific course curricula. The focus group discussion provided insights from communication unit specialists on their joint efforts to maintain and extend curriculum-integrated approaches to academic literacy development in certain disciplines within

their faculty.

The chapter presents the findings from the analysis in three parts. Part 1 considers the anonymous responses of 43 faculty staff to an 18-question survey, which reveal an array of perceptions of academic literacy formed in the contexts of academic teaching, coordination and/or administration. Part 2 details the interview data from the four academics who volunteered in response to the invitation on the survey form. The discussion includes their perspectives on the state of learning and teaching of academic literacy and insights derived from probing key aspects of their experiences teaching at ASCU. In Part 3 the findings from the focus group discussion with members of a discipline-embedded Communication Unit confirm ongoing variations of concepts of language and learning.

The conceptualisations of academic literacy development generated in each part of Phase 3 relate to the broader Australian and global context described in the research literature. Hence, Chapter 6 concludes by summarising the patchwork of factors constituting the *ASCU's cultural climate as experienced by faculty staff*, which provides a foundation for Chapter 7's discussion of the possibilities and challenges associated with the large-scale and sustainable introduction of *inclusive practice* (Wingate 2015) of academic literacy development into mainstream curricula.

6.1 Phase 3, Part 1: Faculty Staff Survey (2016)

Approximately 400 faculty-based staff were sent invitations to respond to an online survey on the place of academic literacy development in undergraduate learning, together with the mandatory explanations and safeguards required by the Human Research Ethics Committee. The purpose of the survey was to gauge a range of views on the appropriate place for academic literacy held by academics in close contact with students. Respondents invited included discipline lecturers, learning advisors,

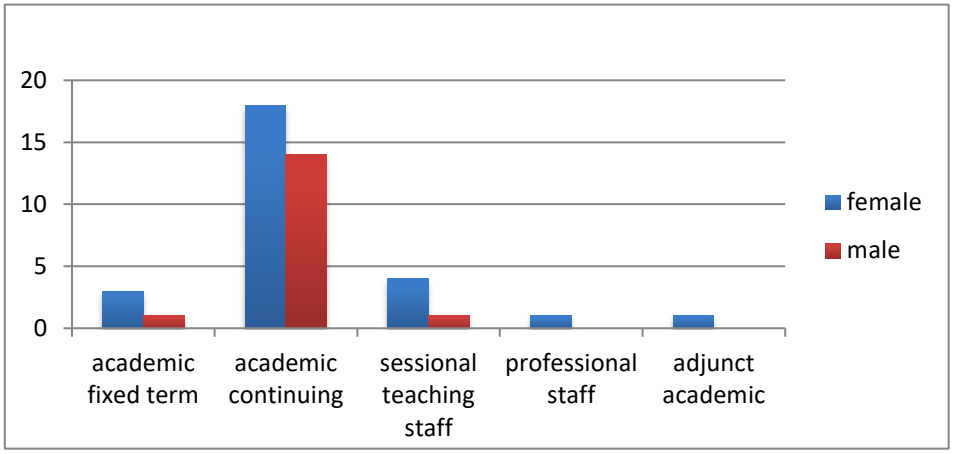
academic integrity administrators, and course coordinators with responsibilities for lecturing tutoring administration teaching and advisory work.There were 43 respondents who completed the questionnaire, indicating a putative 11% response rate. Analysis of the responses follows the sequencing of the questionnaire, beginning with respondent demographics and followed by academic academic reading, academic writing, and curriculum-integrated academic literacy development,

6.1.1 Respondent Demographics (Q1–6)

Respondent demographics provide information regarding the appointment status, gender, academic, administrative and leadership roles, faculty, and contact with students of staff members who participated in the survey.

6.1.1.1 Appointment Status and Gender

Figure 6.1 Appointment Status and Gender of Survey Respondents



Of the 43 respondents, the majority were female (63%; 27 respondents) and held continuing positions (75%; 32 respondents). Nine (21%) were employed as either fixed term academics or ‘sessional’ teaching staff.

Staff on fixed or short-term contracts and ~~other~~ sessional teaching staff were under-

represented compared to academic staff on 'tenure-track' or continuing appointments. Notably, numbers of sessional staff appointments are difficult to determine and do not appear in ASCU's published statistics.

6.1.1.2 Academic Roles. Figure 6.2 shows respondents' roles at the university.

Figure 6.2 Usual Role of Respondents (All Applicable)

The highest proportion of respondents (91%; 39) engaged in Lecturing and course coordination (80% 37). A smaller proportion (32%; 16) also taught tutorials or led demonstration classes.

Fourteen of the 43 respondents (33%), at the time of completing the survey, had recently opted for a change to their employment conditions, becoming education specialists, a position created in 2016 as part of the establishment of ASCU's education academy.

Eleven respondents (26%) named staff development as part of their brief, nine (21%) included student advising, and fifteen (35%), including five of the education specialists, indicated having a leadership role at the university.

Although no respondents identified themselves as e-learning advisors, four respondents (9%) named plagiarism or academic-integrity officer among their roles.

6.1.1.3 Student Contact.

Table 6.1.1 Student Contact: Range & Number of Students

No. of students	1–99	50–99	100–199	200–299	300+	N/A	Response Count	%
	Number of responses							
First year	3	5	7	2	7	7	31	72%
Second year	9	2	6	3	1	7	28	65%
Third year	13	3	4	3	0	7	30	70%
Fourth year (Honours) including thesis	16	3	3	3	0	5	30	70%
Advisory support	3	0	0	0	0	9	12	28%
Pre-Bachelor	0	1	0	1	0	9	11	26%
Masters	19	3	4	0	1	2	29	67%
PhD	22	1	1	0	0	3	27	63%

Respondents were asked about the year levels and average number of students they either taught or met with in other capacities. This revealed a wide range of student contact types, with most respondents reporting contact across all four undergraduate coursework levels, including the fourth year (Honours), which includes completion of a research report or thesis in the final semester.

Two-thirds of respondents were also either teaching or supervising higher degree students, and three respondents had advisory support responsibilities.

6.1.1.4 Proportion of English as an Additional Language (EAL) Students

Table 6.1.2 Estimated Proportion of EAL Students

Q5: I estimate that, in my field of work, the proportion of students whose prior education was in a language other than English (LOTE) is in the range of		
Answer Options	Response Percent	Response Count
0–24%	30.2%	13
25–49%	41.9%	18
50–74%	14.0%	6
75–100%	4.7%	2
comment / not applicable	9.3%	4
		43

Respondents were asked to estimate the proportion of students in their field of work 'whose prior education was in a language other than English'.

Twenty-four respondents (56%) estimated that the number of LOTE students with whom they interacted was in the range 25–74%. Class lists of enrolled students did not indicate a given individual's status as domestic or international. Although reasons for this were not discussed, a possible reason for the omission of that information from the class lists is to mitigate discrimination and stereotyping.

6.1.1.5 Faculties' Interaction with Students

Table 6.1.3 Faculties' Respondent Interaction with Students

Arts	Health Science	Pro-fessions	STEM	STEM + Arts	STEM + Professions	STEM + Health Science	total
7	4	2	19	2	6	3	43
16%	9%	5%	44%	5%	14%	7%	100%

Note: STEM disciplines at ASCU were grouped at the time of the survey into two faculties: (1) Faculty of Engineering, Computer & Mathematical Sciences; (2) Faculty of Sciences

The majority of respondents (70%) were appointed either within STEM disciplines or with a brief across one or two other faculties (see Figure 6.6). The spread of a minority (30%) of respondents across the university's remaining faculties was partly due to the responsiveness of education specialists, whose roles included student support and staff development.

6.1.1.6 Summarising Respondent Demographics. While most survey responses derived from academics working in STEM disciplines, all five faculties were represented. Although teaching and administrative duties predominated, respondent roles collectively and substantially included leadership and learning, teaching and language development and support. This suggests that the survey disproportionately attracted staff in leadership positions and staff with a particular interest in identifying and solving problems associated with improving student learning.

Although this study's respondents were not expected to be absolutely representative of faculty-based teaching staff across the university, the group of faculty staff who responded to the survey does represent a range and variety of individuals with 'coalface' experience of the daily demands on faculty staff in the contemporary contexts of academic life. Additionally, and importantly for this study, from their anonymous responses it appeared that none of the respondents had some, or any knowledge of, the implementation of the AALD self-help literacy program. Therefore, their anonymous insights could represent alternative perspectives on academic literacy development grounded in discipline-specific academic practices.

The following subsections analyse survey respondent views regarding concepts of academic writing (Q7–8), practices of academic literacy 'support' (Q9–12) and curriculum integration of academic literacy development (Q15–18).

6.1.2 Academic Writing (Q7–8)

Two survey questions served to elicit respondent conceptualisations of academic writing. Question 7 (Figures 6.6 and 6.7) probed faculty staff concepts of academic writing's role in supporting students to develop discipline-specific knowledge and the ability to avoid plagiarism while researching and writing. Question 8 (Figure 6.8a) asked staff to indicate the relative importance they assigned to different aspects of academic writing. Analysis of responses to Q7 and Q8 has provided a conceptual pattern that contributes to an understanding of staff attitudes towards the institutional culture surrounding academic writing.

Question 7 comprised eight prompts to be scored by respondents on a 5-point Likert scale, where 1 indicated strongly agree and 5 indicated strongly disagree. There was also scope for comments on these or any other aspects of academic writing. Figure 6.7 shows the five Likert scale response options and responses, which have been consolidated into three responses: 'agree', 'not sure' and 'disagree'.

Question 7's prompts were critiqued by a respondent whose comment suggested that they were 'leading questions'. However (as noted in the methodology), the survey was designed to be primarily qualitative, requiring purposeful phrasing to stimulate respondents' conceptual engagement with a series of possible perspectives on academic writing and draw out elaborate responses. The strategy worked: Q7 produced 15 explanatory comments that provided a sense of the staff attitudes responsible for the scores.

As mentioned, the survey included scope for commentary on any or all prompts. This took the form of a single expandable box that appeared at the end of the prompts. The comments have been analysed in terms of four themes:

1) Academic writing as research writing (ii, iii & v)

2) Academic writing for the learning of discipline-specific content (iv)

3) Academic writing for avoiding plagiarism (vi, vii & viii)

4) Comparison between respondent perspectives on

(i) the notion that academic writing *is difficult and time-consuming for students* and (vi) the importance of *understanding principles of academic writing for helping student in avoiding plagiarism.*

Table 6.1.4 Staff Responses to items describing perspectives on academic writing (Q7)

Q7 Perspectives on academic writing	Response Count	Agree & Strongly Agree	Not Sure	Disagree & Strongly Disagree
(i) Academic writing is difficult and time-consuming for undergraduate students	42	30 (71%)	3 (7%)	8 (19%)
(ii) Academic writing is useful because it is concise, densely packed, logical	42	36 (86%)	6 (14%)	0
(iii) Academic writing is useful because it trains students in their research skill development	42	38 (91%)	4 (10%)	0
(iv) Academic writing is important because it helps students communicate their knowledge in their field of study	42	39 (93%)	3 (7%)	0
(v) Academic writing is important because it is the language of research writing	43	39 (91%)	3 (7%)	1 (2%)
(vi) Academic writing is necessary to help students to avoid plagiarism	42	28 (67%)	8 (19%)	6 (14%)
(vii) Avoiding plagiarism is a serious issue for students	42	33 (79%)	6 (14%)	3 (7%)
(viii) Preventing student plagiarism is a serious issue for staff	42	40 (95%)	1 (2%)	1 (2%)

6.1.2.1 Academic Writing as Research Writing (Q7, items ii, iii & v). Three prompts elicited perspectives linking academic writing to research processes. The *importance* of academic writing as the language of *research writing* (v) was accepted by the majority of respondents (91% 39), who also agreed that it trains students in their research skill development (iii; 91% 39; for both items Four respondents (9.5%)

indicated ‘not sure’. A majority (86%) also agreed that academic writing *is useful because it is concise, densely packed, logical* (ii), however, six respondents (14% 6) indicated ‘not sure’. These responses enable the inference that most respondents saw academic writing as integral to coursework students’ research skill development. Four respondents provided comments relevant to the topic of research writing (R6, R17, R22 and R31**).** *No respondents disagreed, even slightly, with items* ii, iii & v.

6.1.2.2 Undergraduate research writing / research skill development.

Negative written responses to item iii that research skill development was ‘largely irrelevant’ for undergraduates were advanced by academics from vocational, industry-linked disciplines that attract mature-age students returning to study. According to one argument, students already in employment (i.e. mature-age students returning to study) and not engaged in research had to balance conflicting priorities between work and study commitments (R17).

Respondents R6 and R31 chose ‘not sure’ for prompt (ii) for somewhat different reasons. For R6 the qualities of clarity, conciseness, logic and evidence were not confined to academic writing, and graduates who were headed for employment in industry or business needed a command of writing styles featuring those qualities. This response implied that language choices were adjusted to appropriately communicate with their wider audiences of their place of employment. Meanwhile, R31 chose ‘not sure’ because the prospect of a research career would likely be considered too remote to motivate undergraduates to devote time to learning research writing, implying that ‘research writing’ might represent an impediment:

> Research writing is a useful skill if students want to become researchers, but much of what we train them to do, we have to un-train if we want them to be good at communicating with the public using plain English and accessible language. (R31)

All three respondents accepted that 'research writing' was useful in research contexts. However, R31 appeared to hold 'plain English' in higher esteem, positioning it as more 'accessible language' than academic writing, apparently ascribing a hierarchy of values to written texts, that considers 'plain English' *superior* to academic writing.

This perspective construes language's accessibility as fixed rather than context dependent. This view can act as a barrier to exploring how versions of language that are specific to each context are acquired through engagement and heightened language awareness in that context. In contrast, the comment by R6 above highlights the importance of students developing *communicative competence*, a point similar to Wingate's (2015, p.6) view that the 'ability to communicate competently' varies in different discourse communities. This ability is founded on an *awareness* of *genre variations* and associated language choices that are appropriately clear, and concise for audiences in different cultural and situational contexts.

6.1.2.3 Academic Language and plain English. Another perspective on academic language (R22) introduced a caveat regarding the inaccurate or excessive use of academic phrases, especially before they are properly understood or as a ploy for a learner to disguise a lack of understanding of the subject matter. Although R22 indicated 'strongly agree' for item(ii) – that the qualities of being *concise and densely packed* were a useful aspect of academic writing – he qualified this response:

> Agreed, but at the same time 'plain English' is also extremely important. [For example,] students will approximate academic writing and end up with densely packed 'academic writing' but [which] is merely turgid jargon. A basic sentence would have been much clearer, and is at a minimum, a precursor to an academic sentence. (R22)

While this comment initially appears to echo R31's plea for 'plain English', R22 did not

repudiate academic writing for being ‘less’ communicative than plain English. Instead, similar to R6, his comment indicates that understanding what constitutes ‘plain’ and ‘accessible’ language depends on the context and readership for the authored text. For discipline experts in an academic context, the writing style and terminology of their work represents a ‘short-hand’ means of exchanging knowledge with other experts. For students, who are newcomers to a discipline, the purpose of written assignments is to *build their knowledge* and communicate their understanding to an assessor. To do so effectively, learners must use language that is *meaningful to them*. Therefore, an essential component of good writing is the writer’s awareness of what the reader will understand. Thus, R22’s comments indicate that the learners should use the ‘basic sentence’ form to communicate their emerging knowledge of their discipline *not as a superior form* of communicating but rather as a foundation for the more condensed, ‘short-hand’ forms of communication that are acquired as students become increasingly familiar with their discipline via interaction with experts. Thus, R22 has positioned ‘plain English’ as a starting point for the development of academic language, emphasising that learners should initially write using familiar forms of expression and avoid indiscriminate use of poorly understood ‘jargon’**.**

The insights from this analysis strengthen the basic AALD principles with a caveat that students should ’harvest’ only those phrasings and structures that they have understood. Students also need to be able to identify whether an unfamiliar term or structure is commonly used within their discipline, or whether it has been uniquely coined by a particular author. According to East (2005), experienced academic writers rely on wide reading to recognise and acknowledge newly coined terminology. She also indicates that academics require strategies for distinguishing between commonly used and uniquely coined terminology before incorporating novel constructions into their own writing, especially when extending their interest into unfamiliar fields of knowledge.

East (2005) clarifies what this process entails using an example from her own experience of adopting the language and communicative approaches of other researchers when writing articles for publication in less familiar contexts:

> One way that I build my terminology is by working through texts and appropriating terms to my own writing. Of course, I know that when I meet a unique and newly created term or approach, I need to acknowledge the source. The more familiar I am with a topic the more confident I am in doing this; on the other hand, when I meet new terms in a new subject [ ] I am tentative about mining vocabulary. It follows then that the greater my exposure to a particular subject the more aware I am of what is commonly used and needs no acknowledgement in contrast to that which can be attributed to an individual and so requires acknowledgement. Or I could say that the more familiar words and terms become, the less aware I have become of making out their meaning. (East 2005 p. 5)

East's framework for avoiding pitfalls when augmenting her vocabulary in a new area of research suggests that further extensions of AALD pedagogy may be warranted, including workshops focused on reusing harvested items. With practice, guidance and feedback, students might develop their own strategies for both checking their understanding of unfamiliar phrasings and identifying expressions that may have been newly coined before adopting them into their own texts**.** Extending this aspect of the AALD with this approach could enable lecturers to address the problem raised by R31. Instead of 'un-training' students to enable them to communicate clearly in different contexts (e.g. in the workplace), professors would emphasise the logic of *harvesting* aspects of the language and structures commonly used in relevant texts to write in a given (novel) context. Teaching staff would also demonstrate how the research skill of writing-from-sources applies to writing reports and producing other formal documents in the context of relevant industries.

6.1.2.4 Academic Writing for Learning (iv, v and vi). Most respondents (39 persons, 93%) agreed that academic writing was important for students to communicate their knowledge within their field of study (iv), and one (R11) commented on this item. In contrast to respondents who dismissed the relevance of developing the language of research writing for undergraduate students, R11 suggested a concept that would make sense to them. Making an analogy with the fitness training regimes of athletes, R11 emphasised how the repetitive role of academic writing helped novice learners in developing their content knowledge:

> My explanation to students as to why they need to learn to write formally is because it develops their thinking skills. I don't explain it in terms of developing research skills because very few undergraduates (especially level one) have an intention for a research career. I give the example of how athletes and martial artists train their bodies and physical skills through repetitive and formalised exercises. As professional agriculturalists, they need to develop their minds and cognitive skills. I usually need to explain what that term means too! (R11)

In this way, R11 found a way to 'sell' the need to develop formal academic writing that considered and mitigated the neophytes' likely reservations about the relevance of research. He gave students a convincing purpose for engaging in practical, formalised writing exercises by substituting the development of 'thinking skills' for the same end goal as the skills of researching, In doing so, R11 engaged his students' interest in formal academic writing by drawing on their more immediate experience rather than the daunting or remote prospect of conducting research, aiming to convince them that formalised, regular writing exercises would clarify and strengthen their thinking skills. By communicating their knowledge in writing, they could progressively develop their understanding and build their expertise.

Notably, while R11 stimulated student engagement with writing by raising their

awareness of the role of academic writing in the learning of discipline-specific content (prompt iv), they were simultaneously also learning research strategies (v) and the scholarly practice of writing using sources (vi). Applying this insight to his teaching approach revealed R11's recognition of research skill development as *learning development* and students as apprentice researchers. This perspective does not suggest that learners are necessarily headed for research careers. Instead, it indicates that by developing expertise in their discipline, students seek acceptance in the 'academic discourse community' as 'legitimate peripheral members' (Lave & Wenger 1991). This understanding of research skill development was captured in this study's AALD (OPS) pentagon (Chapter 3) and exemplifies the integral relationship between learning and research that has been illustrated through the transformation of the RSD framework into the Models of Engaged Learning and Teaching (Models of Engaged Learning and Teaching, 2020; Willison, 2018; 2020).

By providing students with a perspective on assignment writing that made sense to them, R11 was able to communicate the importance of research writing practice for learning discipline-specific content. His example of overcoming certain undergraduate students' aversion to academic writing represents an insightful pedagogic strategy that might be usefully incorporated into curriculum-integrated academic literacy development.

6.1.2.5 Plagiarism as cheating vs further learning required (Q7, items vi, vii & viii). Question 7 elicited crafted responses that focussed on plagiarism as cheating or as shortfall of technical knowledge. Although 40 respondents (95%, the largest majority for Q7) agreed *that preventing* plagiarism was *a serious issue for staff (viii),* seven less (79%) agreed that students considered *avoiding* plagiarism a serious issue for themselves (vii). Respondent concepts of plagiarism predominantly fell into two categories: primarily cheating, where students presented material created by another as

their own, or primarily technical, where students failed to properly acknowledge source texts. For example, a sessional teacher (R12) suggested that it would have been 'helpful' for her students if there had been a first-year course in which students were taught academic literacy, especially the technicalities of 'how to correctly use citations'. Another respondent (R23) identified the likelihood that plagiarism, in the form of *cheating*, would also occur in areas other than academic writing, such as 'in reflections, portfolios, observation reports and workbooks.

Chapter 2 demonstrated that the literature of the past three decades remains divided on where to draw the line between blatant cheating and carelessness around writing-from-sources, collaboration and using academic writing conventions**.** Dishonesty and cheating in assignment writing have been broadly and uniformly condemned as deliberate ploys to benefit from work that a student has not performed. However, there remains no consensus about the validity of the concept of *inadvertent textual* plagiarism, which is due to a person's inadequate understanding of academic writing or deficiency in the required skills.

Researchers have recognised that citation practices pertain specifically to research writing (Ashworth, Bannister & Thorne, 1997; Howard, 1999; Horacek, 2009) and identified a ack of institutional initiatives for inducting neophytes into academic literacy. They have called for pedagogies promoting academic literacy and enabling students to understand 'what the scholarly enterprise of university education is all about' (Hunt, 2002) and develop 'intellectual autonomy' (Horacek, 2009) and deep-learning approaches to academic integrity (Blum, 2009). At a fundamental level McGowan (2008) foregrounded citing practices as a custom that was specific to university culture. Unearthing the context-specific practices of academic citing, namely that the citing conventions are typical for research writing but are not so for genres that are more familiar to students would help them to understand two reasons why citing practices were a requirement at university. First, research-based writing tasks that require

students to draw on and cite source texts are designed to promote students' learning of discipline-specific content. Second, by practising the rigour of research writing, students would also learn to further their own knowledge development:

> Writing tasks at university are designed to help students learn. Their purpose is not only to gain new knowledge, but importantly, also to learn *how* to gain knowledge. (McGowan, 2008a)

Nonetheless, the policies and the literature concerning plagiarism and academic honesty within Australian tertiary institutions the narrowly focused message for coursework students has continued to decry the use of the words of others 'without proper acknowledgment' as an act of academic dishonesty that constitutes the offence of a 'breach of academic honesty'. Despite changes in the language Australian universities use to refer to their policies – from *plagiarism statements* or *policies* in the 1990s to *academic integrity* or *academic honesty* policies in the 2000s – there have been no widespread changes in practice. The higher education research literature on the debate between punitive measures and educative approaches has generally operated at the level of student *behaviour* and *performance*, reducing the discourse to questions of curbing students' unethical behaviour, on the one hand, and promoting student learning, on the other hand. However, respondents commenting on student behaviour indicated *that certain contextual factors could be responsible for encouraging student plagiarism.*

6.1.2.6 Contextual factors that encourage student plagiarism. Some responsibility for deliberate plagiarism was attributed to the pressure of meeting expectations of achieving a certain level of competence in writing-from-sources. According to R13, rather than helping students avoid plagiarism, a requirement 'to write in a particular style' could be responsible for the opposite, and place 'undue pressure on students to plagiarise'. The scenario envisaged by R13 is most likely in situations where students find themselves 'in at the deep end', that is, when expectations are established without supporting student understanding of how they might achieve the required type of writing, citing and referencing.

Meanwhile, a *lack of time or resources* was perceived to inhibit students learning the meaning of 'academic dishonesty'. The pressure (formal and informal) on both local and (especially) international students to provide 'proper acknowledgement' of the sources they had used drew the attention of R43, a staff member who had performed an administrative role involving managing student breaches of the academic honesty policy in his department for ten years:

> During that time, it has been apparent that insufficient time and resources have been allocated to properly explain academic dishonesty as a preventative measure to students, and particularly new ones. (R43)

It was clear to R43 that the message of academic honesty had often not been understood, to the point that students were incapable of translating it into appropriate academic writing. This implies that these were cases of *inadvertent* plagiarism (McGowan, 2005a; Park, 2003). A lack of time and resources denied students opportunity for active engagement with and constructive feedback on ways of using and acknowledging sources relevant to their assignments.

Somewhat similarly, two respondents considered reports of high incidence of plagiarism overstated. According to R21, she had only come across a few cases 'that needed to be dealt with' in several years at ASCU. Meanwhile, for R17:

> by far the majority of cases are better classified as ‘careless collusion’ rather than any intent to gain an advantage.

Nonetheless, the respondent described plagiarism as ‘an ongoing battle’. A senior academic in a vocational STEM discipline, R17’s experience encompassed the whole spectrum of undergraduate teaching, thesis supervision and course coordination and he had also spent four years ‘managing’ all reported cases within his discipline. He identified two cross-cultural factors from his experience. First, he considered the level of English at which ‘students were allowed to commence their tertiary studies’ to be ‘woefully inadequate’ and suggested that there was little chance of improvement for those whose low English level led them to ‘stick together with other students from their home country’. Second, regarding the cross-cultural context of international students, R17 observed that there was little understanding among academics of the cultural differences that affected the adjustment of Chinese students to Western demands of academic integrity:

> As Western academics we have next to no understanding of the cultural difficulties and expectations faced by students from China, for whom the end result is all important and all means to get there are fair.

This comment serves to draw attention to research studies and media discussions on the contextual conditions that have produced ‘a perfect storm’ of elements responsible for engendering or facilitating cheating among tertiary students (Bretag et al. 2019). It follows that various pressures, including unrealistic expectations, could contribute to the temptation for not only international students but also local students to bend rules and resort to cheating. However, according to Chen and Macfarlane (2016), the cultural differences mentioned by R17 have deep roots:

> [R]esearch integrity in China [...] needs to be understood by reference to cultural norms, including the building of relationships and courtesy toward and respect for authority. Norms based on a Western conceptualization of research

> integrity do little to challenge or alter practices associated with guanxi and the intensive norms of reciprocity which dominate academic life in China. […] The Chinese cultural practice of 'guanxi' means the building of relationships with a view to future reciprocal benefits differing from Western norms connected with self-interested individualism. (Chen & Macfarlane, 2016, pp. 99 & 102)

Views on whether ingrained cultural expectations influence the behaviours of students from the Confucian Heritage Culture, in which traditional cultures often diverge widely from those developed in modern Western tertiary settings, have been a matter of debate in the research literature on Confucian Heritage Culture (Volet & Renshaw, 1995; Biggs, 1996). Greenblatt (2009) elaborated on the pressures to succeed and the associated high price of 'loss of face' for students who failed, naming cheating among the 'unhappy options' that students might engage in, and concluding that having learnt English via a 'modern language pedagogy' did not ensure that students had understood the 'academic norms and expectations' of Western universities (Greenblatt, 2009, p. 102).

At the time of writing, the number of international students comprised 29% of total enrolments at ASCU and more than half of those students were from China (e.g. University of Adelaide Pocket Statistics). In this context, the issues surrounding cultural differences in relation to academic integrity present a compelling reason for tertiary educators to devise strategies for openly and explicitly addressing what the concept encapsulates, what the barriers are, and what the advantages are to enable students from different cultures to learn the expectations and adopt the norms for functioning in the Western tertiary environment.

6.1.2.7 Academic writing for avoiding plagiarism Q7, items (v) & (vi) . An underlying premise for this case study was that not only international students but students from all diverse cultural and subcultural backgrounds needed guidance to develop 'positive approaches to academic integrity' (Twomey et al. (Eds.), 2009) and that this would demand a new pedagogy:

> Students should be encouraged to internalise the codes of academic integrity; these codes include all norms that govern research, not merely the explicit prohibitions that are the focus of most discussions on academic integrity (Horacek, 2009).

A positive pedagogy would ensure that students learn the academic purposes of writing-from-sources. Positive efforts leading to students achieving academic integrity in their writing would replace much of the ineffectual work currently expended in merely avoiding plagiarism.

A pedagogic strategy for reducing the preoccupation with 'avoiding plagiarism' was behind prompts (v) and (vi). Proposition (vi) – that academic writing is *necessary to help students to avoid plagiarism* – is central to the concept of the pedagogy designed for AALD. However, although 39 respondents (91%) agreed with (v) – that academic writing is important because it is *the language of research writing* – its role in averting plagiarism proposed by prompt (vi) was accepted by only 28 respondents (67%), with six respondents disagreeing with the prompt and nine choosing 'not sure'.

6.1.2.8 Avoiding plagiarism & academic writing is difficult (vi) & (i*).* The responses from staff who either disagreed with or were 'not sure' that academic writing is necessary to help students avoid plagiarism (vi) were interpreted by matching them with their views on whether academic writing is difficult and time-consuming for undergraduates (i). This analysis is presented in Figure 6.1.5.

Table 6.1.5 Responses to Q7 (vi) (*Academic writing is necessary to help student to avoid plagiarism*

Agree –Not Sure– Disagree	Respondents	R	Comments summarised
1. Disagree with both (vi) & (i)	(2) R8, R31	R31	Research writing vs plain English (untrains students for communicating with public)
2. Disagree (vi) and not sure (i)	Nil	Nil	
3. Disagree (vi) and agree (i)	(4) R13, R30, R35, R42	R13 R30	R13: Undue pressure on students may lead them to consider plagiarism. R30: Academic writing style is daunting.
4. Not sure (vi) and disagree (i)	(7) R2, R5, R9, R17, R24, R25, R28	R2, R17	R2: Plagiarism focus represents a *moral panic* R17: 'Careless collusion'
5. Not sure for both (vi) and (i)	(2) R9, R24	Nil	
6. Not sure (vi) and agree (i)	Nil	Nil	
7. Agree (vi) and disagree (i)	(3) R4, R7, R21	R21	Plagiarism cases overstated
8. Agree (vi) and not sure (i)	(1) R6	R6	Clear concise writing also needed in industry contexts
9. Agree with both (vi) & (i)	(22) Total count	R12 R43	R12: There is a need for first-year courses on academic writing R43 Insufficient time and resources allocated to properly explaining academic dishonesty

Note: Responses compared with responses to Q7(i)

Academic writing is difficult and time-consuming for undergraduate students).

Nine combinations were revealed

(1) Two persons DISAGREED that (vi) academic writing is necessary to help *students to avoid plagiarism* and that (i) academic writing is *difficult* (R8, R 31).

(2) Four persons DISAGREED with (vi) but AGREED with (i) (R13, R30, R35, R42).

(3) Four persons AGREED with (vi); three of these respondents DISAGREED with (i) (R4, R7, R21) and one respondent (R6) was NOT SURE.

(4) Seven persons were NOT SURE about (vi) and DISAGREED with (i) (R2, R5, R9, R17, R24, R25, R28).

(5) Two persons were NOT SURE about either (vi) or (i) (R9, R24)

(6) There were nil responses for two combinations: disagreed for (vi) with not sure for (i) and not sure for (vi) with agreed for (i).

(7) Two persons DISAGREED with both (vi) and (i) (R8 and R31).

(8) Four persons DISAGREED with (vi) but AGREED with (i) (R13, R30, R35, R42).

(9) Four persons AGREED with (vi); three of these respondents DISAGREED with (i) (R4, R7, R21) and one respondent (R6) was NOT SURE.

Responses pertaining to combinations (1) and (3) who disagreed with the concept that academic writing *helped students to avoid plagiarism* were likely to be aligned with academics who tend to draw on technical – and, therefore, surface-level – aspects, such as rule-based accuracy, to address problems with students' academic writing. While important, such approaches can only manage part of the problem. This approach frequently sends students with inadequate academic writing ability to writing centres for support in the form of *fixing* their grammar or improving their paraphrasing, citing and

referencing skills, which does not address the deeper project of inducting students into writing-from-sources processes. Those who also disagreed that academic writing is difficult likely correspond to that category of experts who, having crossed the threshold of writing-from-sources (Meyer & Land, 2005) can no longer recall the early challenge of understanding the concept and mastering the practice of writing-from-sources, a practice fundamental to academic writing.

This interpretation is supported by the R31's comment (see 6.1.2.2) that it is necessary for industry-related disciplines to *un-train* their learners' academic literacy and focus on 'plain English' for *communicating with the public*, relegating the usefulness of research writing to those students who want to *become researchers.*

The two respondents who chose 'not sure' for prompt (vi) but disagreed with (i) distanced themselves from the existing plagiarism controversy by downplaying the incidence of deliberate plagiarism:

> There is a moral panic about this sort of thing. We need to get over it. (R2)
>
> By far the majority of cases are better classified as 'careless collusion' rather than any intent to gain an advantage. (R17; previously cited)

This position matches that of R21, who agreed that academic writing is necessary to help students to avoid plagiarism but downplayed the need for deliberate text-based plagiarism 'to be dealt with'. Assertions that these respondents had witnessed only low levels of plagiarism in students' written assignments suggest that they did not consider their students' text-based problems with source use and citing conventions plagiarism, therefore presumably approaching the issue educatively rather than punitively.

Meanwhile, R13 and R30's comments suggest that any *pressure* produced by the demand for novice learners to write in a particular style would be *daunting* and might cause those learners to plagiarise, and R31's position indicates that the ability to use formal research writing becomes a hindrance when communicating with the public in an industry context. Their insights reflect perspectives on academic writing that are (in

a sense) limited to the *mechanics* of the written text.

Furthermore, they fail to consider the research-based nature of academic writing-from-sources and the associated conventions, according to which academic writers are expected to indicate their own understanding of the published knowledge pertaining to their discipline. More specifically (and importantly for this study), they do not acknowledge that even novice writers are expected to demonstrate how the arguments articulated in their written assignments relate to those of the sources they have used to build their position.

The prompt that academic writing is *necessary to help students to avoid plagiarism* was built on the etic concept of undergraduate students as apprentice researchers (McGowan, 2010), from which perspective the development of research skills offers students a fundamental logic for the requirement of citations and acknowledgment of sources.

The provocation in prompt (vi) that academic writing is 'necessary' was based on the perspective that academic citing conventions for acknowledging source information represent a construct that varies across disciplines (Du, 2019; Shaw & Pecorari, 2013; Vardi, 2001). Academic writing depends on reference to source texts which can be viewed as the knowledge base on which new knowledge if constructed by the writer. Evidence for this perspective is found in the academic strategy of *writing-from-sources*, a strategy that, together with 'reading-to-write' has been prominent in L2 (second language) pedagogies and research publications (e.g. Pecorari, 2013). However, making these strategies explicit has been largely overlooked in mainstream teaching and in conceptualising in the development of academic literacy and in discussions of avoiding plagiarism (as detailed in Wingate, 2015 Chapter 5, Reading and Writing).

6.1.2.9 Academic Writing as Difficult and Time-Consuming for Students (Q7, Item i). Returning to Q7(i), given the findings on staff perspectives on academic writing and

their priorities when assessing student writing assignments, enables a critical appraisal of the perspectives of those respondents who did not consider academic writing to be *difficult and time-consuming* for students.

Thirty respondents (70%) agreed with the prompt (that academic writing is *difficult and time-consuming for undergraduate students*). Considering the thoughtful comments offered by faculty staff-respondents who were patently committed to *critiquing* the status quo and to *action* aimed at improving student learning, the considerable agreement is unsurprising. However, it is likely that the positions of the 14 respondents (26%) who indicated 'not sure' or 'disagree' capture a silent majority of academic staff who have no time for or interest in aspects of language and literacy development that have hitherto been considered remedial issues. That is, the proportion of negative responses to the notion of academic writing as difficult and time-consuming for undergraduates would be expected to be considerably greater than the 26% recorded by this study if the same prompt were included in a large quantitative study using a representative sampling methodology.

This assumption is based on indications that it is possible for successful academics, to have mastered the processes of academic writing 'intuitively'. By 'acquiring' the discourse of their disciplines, largely through prolific amounts of academic reading, rather than through formal instruction or deliberate 'learning' of rules (Gee, 1996, pp137-141), they may have forgotten their initial difficulties; or they may never have been aware of the gradual processes by which their readings shaped the language and structures they use in their writing. Those who treat academic writing as 'easy' for students may be less inclined to respond to the invitation to complete a survey on academic integrity. If they had, there may have been a far smaller proportion of positive responses to Q7 i. and other questions.

6.1.2.10 Academic Writing Priorities (Q8). Question 8 asked faculty staff to

indicate the relative importance they assigned to eight characteristics of academic writing in the context of assessing an undergraduate student's assignment by ranking the items from 1 (most important) to 8 (least important). Figure 6.8a shows the results of an analysis of the three characteristics *most* valued by the majority of the respondents; Figure 6.8b compares those observations with an analysis of the characteristics *least* valued by the majority. This sections discussion groups the eight prompts into three categories pertaining to academic writing: key components of academic writing (Q8 ii, vi & vii), technicalities of English spelling and grammar rules (Q8 I, iv & viii) and strategies for students to *achieve academically appropriate writing* (Q8 iii & v)

6.1.2.11 Key components of academic writing (Q8 ii, vi & vii). Figure 6.8a indicates the three key components of academic writing that most respondents considered among the most important when assessing student writing. In terms of choosing their top three characteristics: 35 (88%) of the respondents chose the 'logical flow of the writer's argument' (item vii), for ; 26 respondents (72%), chose the use of sources to provide evidence for factual statements and positions(item ii); ;and 18 respondents (45%) chose student's 'argument or voice' (item vi).

Table 6.1.6 Most Important Academic Literacy Characteristics for Student Writing (Q8)

Q8 Writing Characteristics	Response Count*	Selected as among three most important characteristics**	
(i) correct grammar	38	5	13%
(ii) writer's reasons for source material from the literature (e.g. as evidence for factual statement or argument)	36	26	72%
(iii) method for introducing quotations or paraphrases	38	4	10.5%
(iv) use of appropriate referencing format	39	4	10.3%
(v) use of discipline vocabulary and 'academic style'	38	12	32%
(vi) writer's argument, writer's 'voice'	40	18	45%
(vii) structure of the text, logical flow of the argument	40	35	88%
(viii) correct spelling, punctuation	42	11	26%

* total number of responses to each prompt

**percentages based on the number of responses to each prompt

Items concerning technical aspects of academic writing were item (i) (*correct English grammar*), item (viii) (*correct spelling & pronunciation*) and item (iv) (using the *appropriate referencing format*). Eleven respondents (26%) ranked *correct spelling and punctuation* among their top three priorities; five respondents (13%) selected *correct English grammar,* and four respondents (9%) indicated *use of appropriate referencing format*.

Grammar and spelling were considered rudimentary written English skills that could be supported mechanically with digital spell-check and grammar-check function, as recognised by R31 (discussed in the context of Q9).

The two items that could indicate a learner's adoption of successful academic writing strategies were employing a *method for introducing quotations or paraphrases* (item iii)

and employing *discipline vocabulary and academic style* (item v). Although item (v) was ranked among the *most important* by 12 respondents (38%), only four (11%) ranked item (iii) highly.To better understand (i), (iii), (v) and (viii), responses to Q8 responses were re-sorted to identify the items considered *least* important by staff when assessing the academic literacy competence demonstrated by students' written assignments. Hence, Figure 6.8b compares the characteristics ranked most and least important for assessing student written assignments.

Table 6.1.7 Characteristics of Academic Literacy

Q8 Writing Characteristics Ranked Most and Least Important for Academic literacy	Response count*	Ranked among three most important characteristics		Ranked among three least important characteristics**	
(i) correct grammar	38	5	13%	20	53%
(ii) writer's reasons for source material from the literature (e.g. as evidence for factual statement or argument)	36	26	72%	4	11.1%
(iii) method for introducing quotations or paraphrases	38	4	11%	22	58%
(iv) use of appropriate referencing format	39	4	10%	16	41%
(v) use of discipline vocabulary and 'academic style'	38	12	32%	9	24%
(vi) writer's argument, writer's 'voice'	40	18	45%	10	25%
(vii) structure of the text, logical flow of the argument	40	35	88%	1	3%
(viii) correct spelling, punctuation	42	11	26%	25	60%

* indicates total number of responses to each prompt

**percentages based on the number of responses to each prompt

Twenty-five respondents (60%) ranked *spelling and punctuation* among the *least* important components, potentially because poor spelling could be mitigated by digital spell-check functions without reflecting a student's research skill competence. *Correct*

grammar (item i) and *appropriate referencing format* (item v) were ranked among the *least* important components by 20 respondents (53%) and 16 respondents (41%). Given these components are similarly substantially rule-based, they can be similarly handled by mechanical tools.

6.1.2.11 Academic Writing: Summary. In summary, 6.1.2 reveals a patchwork of views on the usefulness of academic writing for content learning, for avoiding plagiarism, and for writing like a researcher, or whether they are difficult time consuming are and whether they hold the underlying principles for avoiding plagiarism.
To conclude staff views on academic literacy support and curriculum integration the following short section draws on the open section data, questions.

To summarise, the sample of comments indicates a wide spread of views on the completed the image of a patchwork of views on the concepts that writing needs support, that reading of academic articles may be problematic but also, as in the comment by R12 , that it may be hard to engage students as a worthwhile pursuit. Nevertheless, as in R13's view, the concept of curriculum integration appears as a possibility.

6.2 Phase 3, Part 2: Faculty Staff Discussions

Faculty Staff Survey follow up Discussions (2016)

Four respondents volunteered to talk individually about the content of the survey.
Respondents: Dr. Mel, Dr. Anne, Dr. Sam, Dr. Fred (pseudonyms)
An individual session (of approximately one hour) was organized for each of the four volunteers. The sessions took the form of collegial discussions. The questions discussed ranged freely over the topics raised by the Survey questions. **(**See

Table 6.2.1 Faculty staff Individual discussion sessions

Data	Participants	Participant codes
Faculty staff Interview transcripts (n=4)	Four faculty staff volunteers represented using the following pseudonyms: FS-1: Dr Mel, FS-2: Dr Anne, FS-3: Dr Sam, FS-4: Dr Fred	FS-1 to FS-4

A total of seven faculty-based staff members provided information on their personal experiences and perspectives on student academic literacy at ASCU. All seven were academics who participated in the survey and responded to an invitation to also be interviewed by the author in a volunteer capacity. Four faculty staff members participated in the individual interviews reported in this section, and three key personnel from a faculty-based communication unit participated in the focus group reported in Part 3 of this chapter. As explained in Chapter 4's discussion of this research's methodology, the invitation to volunteer for an interview was included both at the end of the survey and in the information sheet included in the survey email. The four individual volunteers (coded as FS-1, FS-2, FS-3 and FS-4) have been given the pseudonyms Dr Mel, Dr Anne, Dr Sam, and Dr Fred.

This analysis first introduces each volunteer in terms of their personal tertiary learning and teaching experience and their experience contributing to the academic literacy development of coursework students. This is followed by a section synthesising the views of the four volunteers regarding current *challenges* and future *possibilities* for the academic literacy development of coursework students.

6.2.1 Dr Mel

Dr Mel is a senior lecturer in ASCU's STEM faculty and a member of the university's original cohort of education specialists. In addition to his discipline-specific PhD, he

also has a Graduate Diploma in Education. At the time of the interview, his academic teaching included first- and fourth-year undergraduate classes and Masters by Coursework postgraduate classes. His interest in education, language and learning was evident from his extensive engagement with both the survey questions and the interview. He drew on his observations and experiences of learning and teaching and elaborated his conceptualisations of educational principles as they applied to his own teaching practices.

A key experience for Dr Mel was a disappointing attempt to integrate a multi-stage module supporting fourth-year (Honours) students in developing their research writing skills. In the interview, he discussed this attempt in terms of four concepts that explained the challenges experienced and articulated possible approaches that could have greater success. Challenges included a lack of student motivation and discipline and lecturers lacking time and expertise. Meanwhile, implementations that could improve the likelihood of success included adjusting the timing and development of the literacy intervention and collaboration with experts.

This personal initiative represented Dr Mel's own unassisted attempt to integrate academic writing development into his fourth-year (Honours) course and help his students improve their writing.

Aware of his personal constraints – a lack of time and a lack of the expertise required to prepare his own material for teaching academic literacy – he utilised an existing resource – teaching resources from Writing Science – and ran the sessions as 'peer-oriented tutorial[s]'. However, he was disappointed by the low attendance rate, which he attributed to two factors: attendance was optional, and the work produced was not included in the course assessment. Therefore, the students had no incentive to invest an hour a week in the extracurricular class. During the discussion, Dr Mel elaborated on the concept of motivational power of assessment and the lack of time during regular classes for discipline-based lecturers to teach academic literacy.

6.2.1.1 Assessment as motivator. Dr Mel recognised that assessment functioned to motivate student engagement, expressing confidence that an assessment representing 1% of the course's total assessment would have been able to achieve 50% attendance at the academic literacy sessions:

> I feel with students, that they have perceptions of what to value in a course, and they largely take their cues from the percentage you give to things. But it's not strictly so. A good student will see through grades [to the] set of skills, and value those and feedback, but many students I think – if you put a 1% contribution on something, they'll often bend over backwards to make sure [that] they haven't lost marks [...] which might be completely out of proportion with the effort required. [FS-1**#18]**

6.2.1.2 Discipline-based lecturer's time and expertise. Dr Mel sensed that he lacked not only the time necessary to develop curriculum-related academic literacy but also the expertise to do so:

> I knew, going into it, I had no time to develop materials. If there were existing materials, or things like this, I think it would have been different and I would have could structure things better. But I think time is a factor. [**FS-1**#134]

Dr Mel chose the material from Writing Science specifically to help fourth-year (Honours) students develop their writing for the research projects that would represent the culmination of their undergraduate degrees. The book is a well-designed learning and teaching resource written to introduce and hone the genre-based requirements of fourth-year dissertations. The book's teaching approach combines theory and practice, with each chapter explaining a principle of the research process before presenting practical exercises. Therefore, the students who participated obtained hands-on experience realising each principle in practice.

6.2.1.3 Timing and development. However, Dr Mel expressed concern that his students had not been properly introduced to academic writing during their first three years of undergraduate study and did not understand that they needed to adjust their writing to meet the demands of research writing. This led to two observations: the ability to write like a researcher needs to be developed over time and staff collaborations are necessary to collect expertise in both discipline-specific content and academic literacy development.

6.2.1.4 Collaboration needed to help students develop their research writing skills. Dr Mel considered collaboration between discipline-specific experts and academic language and learning experts critical, especially given his contention that his students' supplementary language development support had arrived 'too late' in the degree program. For example, describing his fourth-year students having to complete a literature review that they had 'not fully understood', he suggested they had been 'thrown in at the deep end', leading him to advance the notion of a three-year development program:

> So the solution to that is to start earlier with them, and there is truth in that, definitely. [FS-1#119]

To outline an argument in favour of a three-year induction for second-year undergraduate students into reading and summarising journal articles, begins with a counter argument, the proposal of an alternative that has some resemblance to the AALD pedagogy:

> Let's say we started in 2nd year – the maturity of a 2nd year student isn't the same as the maturity of a 4th year student, and a lot of good work can be wasted [slight chuckle] [FS-1#120]. So if, for example, you had a module in second year, [where students were told] 'Here are some journal papers here is how you might engage with them', and you carefully curated the papers, and

> thought about some exercises in which they have to write their own summary – something like this - that could be really good. [FS-1#121]

However, Dr Mel foresaw two problems, first, that unless second-year students recognised the exercises as integral to their learning:

> […] it could also – if it's not perceived appropriately by the students, it could be seen as a chore of little value, and that they therefore don't – that they might do it, but not really engage with [it]. [FS-1#122]

The second problem was that 'a lot of good work can be wasted' if students are not helped 'to see how the dots in what happened in second year is going to be built upon in third and fourth year' [FS-1#121]. With these two reservations his view flags an approach that is in line with the calls in the literature to make the processes of academic reading, and source-based writing integral an part of discipline content learning and teaching throughout the undergraduate years (Abbott, 2013; Arkoudis, 2014; Chanock, 2013; Dunworth & Briguglio, 2010; Lillis & Turner, 2001; Lea & Street, 1998; Wette, 2010).

6.2.1.5 Summary. Dr Mel's initiative was on track for full integration, but was poorly attended, likely due to an academic culture that does not explicitly discuss academic literacy and positions academic literacy outside of the facets of learning that are valued. In its initial form it was therefore unlikely to be sustained. Although Dr Mel's workshop sessions were embedded in his fourth-year course in the sense that they addressed issues associated with the papers and reports the Honours students were writing, they were not integrated into the assessment process within the content-based curriculum. Furthermore, the relevance to academic literacy development was not obvious to most of the class, and the institutional culture precluded attaching assessment to a workshop support program for developing 'skills' still widely labelled

'soft', a step generally not considered an option for courses prioritising discipline-specific knowledge.

Dr Mel identified the power of assessment as a reward for effort and a motivator for student engagement and believed that even allocating a nominal assessment amount to the literacy module might have increased attendance to around 50%. He also advocated beginning working towards building student expertise two years earlier in the undergraduate program, a step that would ultimately ready students for their fourth-year Honours dissertation. He recognised the need for collaboration in this process but had not established mechanisms for finding such individuals.

Dr Mel's efforts significantly resembled the AALD approach, which had been part of the University's academic staff development program (Teaching at University), but which he had not encountered. This anecdote demonstrates how large institutions such as universities depend on chance encounters, despite the extensive available networks, which indicates the need for answers to questions about whether academic staff development was available, visible, expected or promoted and whether the university has academic literacy experts who are willing and available to operate as collaborators.

6.2.2 Dr Anne

Dr Anne is a linguist whose first degree was in foreign languages. In her academic appointments at two Australian universities, she had specialised in teaching English as an Additional Language (EAL). She has a broad range of experience in designing and coordinating pre-enrolment introductory and development programs, and post-enrolment academic language and learning support. At the time of the interview, Dr Anne was also responsible for teaching research methods and the supervision of international students' dissertations in a Masters-by-coursework program. While much of her tertiary teaching experience has been with international students, she also

devised and coordinated an undergraduate, credit-bearing course on Academic English which was an option for both ‘native’ and ‘non-native’ English speakers (NES and NNES).

A key experience for Dr Anne was the challenges she experienced when her international Masters-by-coursework students had not made use of the research writing strategies, nor the precepts of academic honesty which had been explained and actively developed in her class teaching sessions. Dr Anne’s experience is outlined below followed by a discussion of the nature of challenges for the development of writing and reading, a tentative concept for a direction for change that emerged for future possibilities.

6.2.2.1 Academic honesty. The basic entry level English of international Masters’ students, their lack of understanding of the nature and demands of research writing and consequently their inability to apply the concepts of academic integrity to the writing of their dissertations. The Masters students had attended Dr Anne’s workshops where they were inducted into the processes of research writing, instructed in the principles of ‘academic honesty’ and given workshop time to practise and receive feedback on their efforts of citing and acknowledging source material with references. She found however, that while the students were able to produce well referenced exercises during workshops, they did not apply the research-writing principles in the writing of their dissertations.

> The whole concept of academic honesty needs – that is one that needs reinforcing an awful lot. I’ve had students who have done an academic honesty quiz which was based on the plagiarism policy. They had to read the policy and answer the questions, showing where the answer came from in the policy, putting it into their own words, [but they] still plagiarised, terribly, later on. [They regarded it] just as an exercise ‘nothing to do with what I am actually doing in my own research’. (FS-2#101)

Dr Anne's view was that the students had been given many chances to redo their work:

> They finally got there, with all the excuses, 'oh I didn't know how, I didn't know this, I didn't know that'. However, they did know, because they've done it and I told them, but they didn't seem able to apply it, even when we spoke to them. Three different people spoke to them [FS-2#103)

Dr Anne was unsure how to interpret their failure to apply the feedback they had been given. In one instance she wondered whether, perhaps, the student 'just couldn't be bothered', or even whether 'someone else was doing the work for her' (FS-2#105) She judged that the fundamental challenge seemed to be her students' a low level of English language proficiency. She found that although her Masters' students were in the second (final) year of their course, the level of their academic English as 'generally quite poor' in terms of structure and expression:

> the structure of the whole thesis for example, understanding of citation, Academic Honesty. Individual language expression is often extremely poor, critical thinking, being able to conduct and write a piece of research. (FS-2#19-21)

Although her Masters' students were in the second (final) year of their course, she judged the level of their academic English as 'generally quite poor'. She gave the example of three students whose dissertations she was supervising, all of whom were struggling with English including one who was, in her words 'a very good student' but whose 'English expression' needed a lot of work. She considered him an 'excellent student'. While the other two needed a great deal of prompting (FS-2#27)**.** The questions raised by this experience were about the kind of reading and writing that was expected of coursework students and the integration of academic literacy development

6.2.2.2 Academic Reading. Dr Anne was surprised and 'shocked' to hear from undergraduate coursework lecturers that they generally did not include academic articles in their course reading lists. [FS-2#57]:

> When I first came [to this university] I had to contact someone in each of the different disciplines that our Introductory Academic Program students were going study in. That was a big range of disciplines. and I had to ask for a journal article that the students could critique during our course. I just assumed they would have several articles ready for their students to read and they could just send me one. But they didn't. Some had a great trouble finding them [FS-2#131, 134].

Dr Anne was firm in her view that academic articles should be a compulsory part of undergraduate education, that this should begin in first year, and 'really be part of the course', developed in tutorials; and that it would be assessed in an integrated way by being part of an essay that required the inclusion of a number of articles. [FS-2#51] She provided ideas on how it might be scaffolded, in the first instance, to give students some reading strategies. She projected a scenario where a tutorial class in an archaeology course would be shown a journal of their discipline with an article that is relevant to the course the students are engaged in and which would be relevant and tied into the assessment of a subsequent essay assignment:

> So the first tutorial might be 'this is how you do it' but then they're given journal articles to read, and they could be discussed in each tutorial, so they would have the incentive to do it, and it would be part of the assessment at the end, where they have to write an essay including five research articles for example. [FS-2#51]

6.2.2.3 Academic literacy. The reasons Dr Anne gave for the importance of reading were that familiarity with research articles would help in inducting students into the culture of research:

> Well I think it helps the students to understand what the discipline is about. And it helps them to understand that there is a research focus to what they are

> doing, are not just a bunch of ideas thrown together. It helps them to learn who the experts are in their field, for example, if they chose a well-known person. They would get the models for their writing [FS-2#53, 55]

Models for their writing might also include research papers for their referencing conventions, raising another query. Dr Anne questioned whether science students, doing laboratory reports, ever had any writing to do at all that required referencing. However, projecting the future scenario when these students do have to write, Dr Anne was firm that it would have to be 'built in' and that to make it mandatory would require referencing to be included in the assessment as the motivator, because:

> they haven't got time, and they wouldn't get support in the writing centre to do it, and if it's not assessed they wouldn't bother either. So I'd be putting small assessments into every course that they're doing – or some time – in one or two courses over the year, or something they have to do. [FS-2#83]

However, Dr Anne identified that the perspective of language as matter of technical accuracy presents a challenge for the kind of integration she sketched out. It is the notion of 'an easy fix' and the concept that students are deficient, and in need of remedial services, that obscures an alternative understanding. It can block an expert's explicit memory of the tacit understanding gained from their own studies, that the discourses of academic literacy are variable and that to master them is a matter of transition and new learning for all students, as they move from discipline to discipline. The complexity of literacy was also the reason why Dr Anne held the view that the work of support services such as a Writing Centre could not take the place of academic literacy development in the context of the academic readings of specific disciplines. Referring to her own experience of coordinating and teaching an introductory course, and her familiarity with the current work of the university's centrally located writing centre she added her reservations, the restricted amount of time available, would be inadequate for dealing with the complexity of students' needs [FS-2#3, #33].

Dr Anne's cameo of work with Masters' students revealed the frustration, knowing that to offer linguistically based understanding of students' academic literacy problems came too late to be effective, as was also the case for Dr Mel's fourth year workshops. Her efforts, in the short time available, would have been more appropriately introduced and scaffolded as part of the early stages of the students' study program when they still had the time to engage and learn. A similar case is reported in Part 3 (6.3) of this chapter, where the learning adviser, 'Susan' and her colleagues in the STEM faculty are also frustrated that that the strategies of researching and language and conventions had not been integral to their Masters' students prior learning.

6.2.3 Dr Sam

Dr Sam is a lecturer in a Faculty called *The Professions* He has a PhD in Management and a *broad range of industry experience in management and research.* He has taught postgraduate (Masters) and undergraduate courses *at two Australian* including classes on research methods and discipline-based *research at two Australian universities.* Dr Sam made contact with the author to inquire about the AALD strategy of 'harvesting language' from academic readings, and to do so 'safely' (i.e. without risking plagiarism). The author attended part of one of Dr Sam's teaching sessions as an observer. In turn, Dr Sam invited the author to give a one-hour AALD workshop within that master's course, which Dr Sam then attended as an observer.

Harvesting re-usable language

In this session, Dr Sam witnessed a practical example of the author's approach to introducing students to 'harvesting re-usable language' from an academic article, which represents a key component of the AALD pedagogy. While Dr Sam agreed with the principle that academic reading helped shape students' academic writing, he expressed concerns that the overt focus on language could render the pursuit counterproductive,

articulating the need to adapt to the nature of his discipline and the context of student motivation by adopting a subtler approach.

Dr Sam's discipline is in a field with an immediate and applied purpose. The *intended learning outcomes* for its programs support students' creativity and skills for promoting the successful implementation of imaginative developments both in the industry more broadly and within specific professions. Therefore, Dr Sam was aware that the interests of his students did not fit with the practices and language of research writing, despite their postgraduate status. For them, the practicalities of realising creative ideas would likely predominate.

Accordingly, he needed to be cautious when introducing concepts associated with academic literacy and research and tread the fine line between the applied field of the business world and the academic world of research. His exposure to the sometimes-disparaging perspectives of academia led him to understand the need to account for the contexts of his students, including the intentions with which they have chosen to pursue tertiary study. Thus, he was wary of *explicitly* addressing academic literacy:

> [P]eople don't see it as necessarily relevant, because […] now I say that from quite an applied field […] for a discipline that I am in that is almost inherently practical – and students come into a course, with that as the focus […] taking an academic bent isn't necessarily what they expected. [FS-3#203]

At the same time, Dr Sam extolled the substantive academic nature of the course (for his discipline), indicating that he and his colleagues were approaching their field academically by using research-based knowledge in their teaching:

> What I think is, that we actually deliver in our courses is more than just content knowledge in that discipline. I think part of what we should do, […] given that the people have come to us at the *university*, is to give them some university stuff. So, it's research stuff, and it's also high order thinking, and it's being able to construct an argument coherently, and so *that* is, I think, an essential part. [FS-3#206 & 208]

However, to 'advertise' this aspect of tertiary learning with the AALD 'label' would have

been, for Dr Sam, 'off-topic' and, therefore, alienating for the students.

6.2.3.1 Academic literacy goals are 'inherent'. At this point, the interview became more discussion-like, aligning with the collegial nature of this case study. The author 'response to Dr Sam's position suggested extending the relevance of the AALD beyond academic communication not only to different disciplines but also the workplace and other settings. This could be achieved by replacing the terminology academic literacy with 'course-specific' or 'situation-specific communication'. This would mean that, as a new employee, or when given a new portfolio, a person could find and analyse certain examples of the report to educate themselves, examining those examples to understand the kind of writing they are expected to produce. This would mean adjusting the wording but retaining the process of reading for writing.

Dr Sam responded with some interest in the idea of adapting the AALD concept to promote the purposeful acceleration of context-specific literacies more generally:

> Oh yeah, sure, I would endorse that. In fact, I think that's probably […]
> ye, I think that – I think that's probably an angle in – if that's part of this – and I get the sense that part of this is to advocate for techniques and the *adoption of* them, I would say that would be potentially fruitful. [FS-3#222]

However, Dr Sam did not consider it applicable to the specific circumstances of his own field. For him, the learning of discipline content, methods, attitudes and communication skills should be driven unobtrusively, by the strategical positioning of assignments, assessment criteria, and allocation of marks, while turning to the concept of a better generalist education before students specialised:

> But I also think, […] I think that's the point I was getting to […] I think it actually belongs everywhere, and that – students who come to university should probably have some of this already [...] and the fact that they don't is disconcerting. [FS-3#223]

6.2.3.2 Assessment as Motivator. For Dr Sam, the key tenets of the AALD approach, the 'harvesting' and re-purposing of elements of academic literacy to meet students' academic goals should develop naturally; that is, they should not be overtly taught [FS-3#151]. This 'inherent' approach means that the assessment criteria for a given course would be tailored towards learning outcomes commensurate with students becoming competent in reading and writing as researchers.

In practice, this meant that Dr Sam would advocate utilising the motivating power of assessment. For example, to guide students' academic writing, the assessment rubric included the criterion 'developing an argument and supporting it with evidence':

> So I have criteria in my rubrics that talk about supporting your argument, and that's part of it, you know, being able to coherently and logically argue something, that's part of it. [FS-3#146]

To incentivise students to engage in academic reading, Dr Sam allocated increasing assessment weighting to two assignments specifically designed to engage students in reading the research literature. For example, he initially allocated 10% to a task that aligned with the course objective of developing an ability to engage with the research literature. However, he found that 'even so, I haven't motivated them enough that they take it seriously' [FS-3#127]. Therefore, he planned to reorganise the assessment and build it into a larger, more complex assignment worth 30% of the course grade [FS-3#135].

6.2.3.3 Non-native English Speakers. Dr Sam's position was also influenced by the contextual factor of his course attracting students (international and domestic) who were non-native English speakers (NNES). There were *problems with their academic reading and writing development* that were not resolved by increasing incentives. Therefore, Dr Sam recognised the need to accept certain limits:

> So, I think it gets down to specifically motivating them with [a] significant sort of percentage. But I've also had to adjust my expectations of the ability of students, especially those where English isn't their first language, to be able to read the research literature and make any sense of it. So – I've had to – reassess, sort of – I've lowered my bar, I've tried to sort of *up* the bar in terms of how it is assessed - to motivate, and also *lowered* the bar in terms of my expectations. [FS-3#137]
>
> They're not going to read them and get it like a PhD student would. [#139]

Dr Sam also indicated concerns regarding an overall '*lowering of standards'*, among other similar concerns, especially with regard to English language standards and the internationalisation of education. Other Phase 3 participants voiced similar perspectives, at times tentatively and at other times emphatically.

This study centrally concerns this issue, which can be articulated in terms of the possibility of achieving the relocation of academic literacy in the Australian tertiary sector from the periphery to the centre of learning, teaching and researching (Stevenson & Kokkinn, 2007).

6.2.4 Dr Fred

Dr Fred has a PhD in English literature, and his academic teaching and tutoring began in a tertiary English department before later expanding to academic literacy induction and development programs at two Australian universities, leading to several years spent teaching in faculty-based tertiary programs for native English speakers (NES) and NNES. His experience also includes working as academic adviser in tertiary study skills support, coordinating a student learning centre, and designing and teaching a university preparatory program. At the time of the interview, his teaching included a mainstream introductory course that forms a mandatory part of the curriculum of all undergraduates in the Faculty of Arts, a course generally taken in the first semester of their degree.

This course aims to induct students into the practice of 'discovery learning', serving to introduce them to the character of humanities research. The course has its origins in an initiative called the Small Group Discovery Experience which was introduced to the University of Adelaide in its 2013 Strategic Plan, the *Beacon of Enlightenment*. The university committed to providing all students with a 'small group discovery experience' in at least one course during every year of their degree, beginning in 2015 before increasing adoption progressively over three years.

The pivotal experience Dr Fred discussed in the interview was the opportunity to introduce the entire cohort of first-year Bachelor of Arts students into the experience of engaging meaningfully in their own research skill development.

6.2.4.1 Academic Literacy Development. Dr Fred inherited the faculty's 'discovery experience' program, which had been designed to provide students with both individual and group-work assignments. During the first half of the semester they completed an individual assignment called a 'research essay'**:**

> We give them questions, they do research, they find articles, they do their referencing, they create an argument, they do structure, the academic language, all of that business. [FS-4#17]

To guide their RSD, the students spent the first three or four weeks on a preliminary assignment, an annotated bibliography. This related to their chosen research essay topic. In class, they completed some work identifying 'scholarly articles' among different types of resources: 'scholarly, non-scholarly, popular journalism, peer-reviewed', and they practised using Harvard-style referencing conventions.

> So they start off with the Harvard-style reference[s], to show that they can do that convention, and then they do the annotation of about a hundred words each. [FS-4#17]

Dr Fred put his own stamp on the course by modifying the intended learning outcomes

and the associated assessment criteria:

> [W]hen I came in, the idea was that they would do some summary and they would do some critique [which was] that traditional summary-critique type model annotation. [FS-4#17]

He removed the focus on 'summarising' and 'paraphrasing' from the assessment criteria for the annotated bibliography, because he considered these 'a bit too easy, too doable'. While the simple tasks of retelling or paraphrasing were important for students to come to understand the content, these skills would be introduced and practised in class. However, in their writing, they needed to add an 'evaluative component', that is, their own critical perspective. Therefore, he allocated 40% of the assignment to an assessment criterion focused on the 'relevance' of the source to the student's topic:

> So what I really wanted students to do was say, 'here's my source, this is how it's relevant to my essay topic', [or,] even better, 'this is how it will serve as evidence in my argument for my essay topic. This is how I'm going to use it in my essay argument, in the end'. So really, that's the main switch I made to the assessment. [FS-4#18]

6.2.4.2 Research skills development and assessment. Dr Fred changed assessment criteria to scaffold student learning towards them becoming scholars. The traditional practice of providing students with add-on support by teaching paraphrasing, summarising and using correct referencing conventions aimed to help them to *avoid plagiarism*. However, for Dr Fred, these strategies failed to guide learners towards *achieving academic writing*. That is, when students do not comprehend the underlying logic of using source information as evidence for their argument or have no experience of presenting that evidence using their own words, they are vulnerable breaching university policies concerning plagiarism or academic honesty and integrity. Definitions of plagiarism used by Australian universities have long considered the failure to appropriately cite a breach of academic integrity, even when this failure is due to a student's lack of understanding or ability. According to Dr Fred, this has produced a

learning environment surrounding academic literacy development that makes it *unsafe to fail*.

Dr Fred's adjustments to assessments and his corresponding learning and teaching methodologies addressed this issue:

> The way to do that is to create *lower-stakes* assessments. So what you do - it's like you are scaffolding, making it: 'yes, it's safe to fail, yes you do something in class, or you practise paraphrasing or you practise your referencing, or you do your annotated bibliography'. So in [this course] that's what we do. [FS-4#142]

By starting slowly with the annotated bibliography, students were able to practise arriving at an understanding of the content of their readings, especially given the annotated bibliography took the form of a writing exercise in a genre not requiring referencing – for each 100-word annotation, the entire text related to the same source. The second half of the course was designed to consolidate student understanding of building an argument from a personal position and defending it with evidence. This took the form of group work during the second half of the semester. A role-play debate about climate change, a serious and contested contemporary topic, enabled students to explore the experience of producing arguments from varied perspectives. Different groups took on different stakeholder roles – Australia, the US, India, China, Greenpeace, and business and industry groups – and members of each group researched problems and solutions associated with climate change from the perspective of their allocated stakeholder.

> So this is safe-to-fail stuff, [...] they do it as a group, they don't have to become scholars of climate change, they don't have to have that academic authority around climate change, they get some clues as to what their position could be. So if you're [...] representing Australia, you're probably going to think that *coal* is the solution. So what they do is, they still do research, and it's still an evidence-based argument. [FS-4#143]

Students then utilised the work on academic practices of argument, critiquing and referencing that they developed during the first half of the semester. Each group

presented its position as stakeholder in the climate change debate as an evidence-based argument. Rather than documenting this in writing, they produced videos:

> So they create an argument, but in video format, and they still have references and a reference list at the end of the video. So all of that academic literac[y] is still there. But they don't have to have the perfect solution […] So they're not yet having to be scholars in the discipline, but they're able to test the water a little bit. And have a bit of fun. [FS-4#143]

The final step in the scaffolding process involved students, after seeing each other's video presentations, gathering for a 'mock discussion summit', where they were able to ask questions and defend their stakeholder position. Dr Fred gave an example of students having fun with politically controversial information that had appeared in the Australian press:

> One of my students was representing China, and he was having a go at Australia, and he was saying, 'well yeah, you say you care about the environment, but what about the Adani coalmine?' And they were: 'ah – well – job creation and – blah-blah-blah' […] They played, and it's a bit of fun and all of that – but they're still doing the serious learning and the serious academic literacy stuff – but it's 'safe' in a way [...] So I think that this kind of safe-to-fail idea absolutely does apply to students. [FS-4#143]

Thus, this low-stakes assessment approach introduced students into academic literacy practices as early as the first semester of their first year at university by engaging students in the development of the research skills of evaluating, analysing, synthesising and communicating information gleaned from source material. Dr Fred's method demonstrates the possibility of creating learning environments that support the gradual, scaffolded cultivation of research skills as a fundamental component of academic literacy development.

6.2.4.3 Embedding Academic Literacy Development. Dr Fred's approach has involved bypassing remedial practices centred on superficial conceptions of learning to enable direct access to deep engagement with student literacy and learning

development. The common practice of providing additional support for underperforming students derives from a deficit view of learning that focuses on developing 'soft skills' in isolation from the learning of technical content, such as the detailed mastery of correct citing and referencing conventions to achieve academic literacy. For Dr Fred, the main problem with 'soft skills' is that they suggest an add-on and a 'technical knowledge thing':

> So I don't like the notion of skills because it suggests […] that there is a procedure that you can follow, and that there are rules of thumb, there's a couple of tips and tricks and that that's what you should do. […] If you see that as a skill, all about a technical knowledge, then it is about knowing how to do a Harvard reference, in text and in the reference [list], knowing where the dots and commas and colons go and things like that. [FS-4#77]

For Dr Fred, such 'technical stuff' could be more easily achieved by using online referencing tools, and he proposed that his students utilise digital tools (e.g. *Endnote* and *Cite This For Me*) for this purpose [FS-4#78].

Dr Fred's approach of inducting students into argument and criticality was anchored in his understanding of 'adaptive leadership'. Regarding the 'skills' model, he distinguished between *technical* and *adaptive* challenges:

> So to say that something is a 'skill' suggests that it's a technical process, it's a technical knowledge, it's something that you can apply a known solution to, it's like a recipe. And that doesn't mean that it's not important, it doesn't mean that it's not complicated, so technical skills, for example, include brain surgery […] very highly skilled people do this, [by applying] known processes. When you have an adaptive challenge, it's a problem that is difficult to define, and we don't have a known solution to it, and it inherently requires some sort of change or transformation. [FS-4#76]

That is, the development of literacy – in this case, academic literacy – always depends on the specific context. There is therefore no single, 'known solution', meaning learners in every new situation face an 'adaptive challenge' that calls for applying a logic to problem-solving rather than a technical formula. Therefore, it is unsurprising that Dr Fred remarked on the need for academic literacy to form part of content-based

curricula:

> My strong belief about academic literacies is that [they] absolutely need to be embedded into the curriculum and that you need a close synthesis between content and process. I'm very much a believer in the ideas of James Paul Gee and others about situated cognition, and situated learning, and that you only learn in a specific context; and that it's only possible to learn really effectively through a grounding process, and […] for want of a better word, 'soft skills' – in the context of content. [FS-4#14]

Dr Fred also emphasised the need for both specific faculty-based courses and the broader inclusion of literacies by academics in their curricula; that is, an institutional environment that focuses on so-called soft skills 'across the board' [FS-4#57]**.**

6.2.4.4 Problems and Solutions. The problems Dr Fred identified included a 'depersonalisation and a dehumanisation' of the learning and teaching environment generally, which he considered partly caused by technology, which had enabled a 'general neo-liberal bureaucratisation of learning and teaching' [#61]; students being 'represented as a data sets' [FS-4#58]; and academics 'being more and more quantified through performance appraisal processes' and labouring under work-load pressures [FS-4#60–61].

He was pessimistic about the capacity of the tertiary sector's reoccurring top-down structural changes to effectively address these problems:

> I mean the classic thing, you can see it in staff surveys, and in the literature everywhere that universities deal with change very poorly. My view is that one of the reasons they deal with change poorly is that they see it as a technical challenge– and that's why it's never going to work. […] You have a restructure, and then in three years, you have the same problems that you had to start with, because you haven't actually faced the *adaptive challenge* that's there. [FS-4#103]

Although Dr Fred did see *possibilities for solutions* that could help to re-humanise learning and teaching, he added a caveat:

> It really needs to have that] long term and it needs [that] culture shift. And you don't shift cultures by making policies or making rules or edicts. [FS-4#116]

Instead, the solutions would come from the teachers themselves, 'adaptive leaders' addressing issues within their own courses and classrooms:

> And the best teachers do, you can do that a lot, and you can do that for a technology, and you can do it in the classrooms, traditionally more is done in the classroom. [FS-4#125]

Dr Fred had worked in an academic unit with a director he considered an 'adaptive leader':

> [Their mantra was] 'Everybody in this unit is a leader, from the receptionist to the director'. [FS-4#116]

Thus, all members of the unit were encouraged to contribute creatively, enabling adaptation, change and learning, which Dr Fred considered the kind of force needed. However, he also understood that no quick fix could change a culture, that implementing innovation took time, patience and trust and involved being resilient and prepared to take risks and learn from collaborators, setbacks and unsuccessful initiatives:

> And then, kind of, a patience and sustained engagement – the kind that [the academic learning innovator at this university] does for instance. [FS-4#127]

Dr Fred viewed innovation of the RSD framework and its long-term sustainability as a model for changing institutional culture:

> The RSD [framework] as a model for change management and getting progress in things like this is fantastic. [*The innovator*] is really seeing some big successes now, I think, but it's taken a long time […] It's taken courage and vulnerability and risk and failure and experiment, and all of that over a long period, which has created a space for some people to genuinely change stuff. [FS-4#128]

Dr Fred's comments suggest possibilities for integrating the scaffolded development of

undergraduate academic literacy into their induction into scholarly practice more broadly. Furthermore, for him, the model of change would be driven by academic teachers:

> One of my convictions is that teaching, and leadership have a lot in common, actually. So I think that this is why academics often become leaders […] They can become exceptional leaders, quite easily, because those principles of teaching and learning that we've been talking about also apply to leadership. [FS-4#130]

However, the success of individual efforts to initiate innovation depends on an environment that places trust in teachers-as-leaders:

> [For example,] if we had a philosophy, if we [had] a school or faculty or something that [said] 'as a teacher, you're a leader'. [FS-4#130]

Nonetheless, as Dr Fred mentioned, achieving sustainable and scalable cultural change represents a long-term project requiring resilience and persistence.

6.2.5 Conclusion

The interviewees were volunteers, and the evidence they provided suggests a clear motivation to volunteer their time deriving from their professional experience with the issues and their own attempts to resolve those issues. They had encountered low levels of English communication skills among some NNES students and poor academic literacy skills among both NES and NNES students. At times, learners seemed unable to connect the concept of 'academic honesty' to the integrity of academic writing, citing and referencing when it came to their written assignments. The interviews were clear that each participant had considerable academic teaching experience and was personally engaged with issues surrounding English language competence and the development of academic literacy.

However, participants in the study – including survey respondents, interviewees and contributors to the focus group – generally did not represent alternative views of tertiary

teaching. For example, there were no responses that prioritised the inclusion of discipline content designated for specific courses in the formal lectures. Just one voice among the interviews represented the view that language and literacy development are skills set that students should have mastered beforehand, in line with the remedial discourse that is contested in the literature that promotes the inclusion of literacy in mainstream learning and teaching (Arkoudis, 2014; Wingate, 2015). As volunteers who were clearly engaged in thinking about or acting to make a difference to academic literacy issues which are the subject of this study, the current study indicated a tendency to towards views in the research literature that promote a need for recognising a central and context-dependent role of language in learning and therefore striving for 'whole of institution' approaches (Harper & Vered, 2017).

6.3 Phase 3: Part 3 Focus Group: Communication Unit Academic Advisors

Table 6.3.1

Data	Participants	Data codes
Focus group transcript	Three faculty-based Communication Unit members represented by the following pseudonyms: Lucy, Ella, Susan	FG-1 to FG-292

6.3.1 Introduction

The focus group discussed in this section involved three self-selected members of a discipline-based communication unit that had been embedded in four schools within the University's STEM faculty some 20 years before this study's fieldwork (FG-200). These participants – Ella, Susan, and Lucy (unit coordinator) – are Academic Language and Learning (ALL) specialists with expertise in linguistics and teaching EAL. They hold continuing academic appointments as lecturers in the STEM faculty. A fourth member of the unit, who was unavailable for the focus group, is employed as a

'sessional' teacher and paid an hourly wage [FG-61].

During the focus group meeting, the communication unit members discussed their experiences of different approaches to addressing academic literacy within curricula. Analysis of the focus group transcript understood these experiences and approaches in terms of three emic themes that emerged from the data and the broader etic theme of possibilities and challenges that the study broadly encompasses:

Theme 1: *Equity* for international undergraduate NNES students (Curriculum integration of academic English literacy and research skill development).

Theme 2: *Remediation* for international postgraduate coursework NNES students (Partial integration of language support).

Theme 3: *Inclusivity* for all students (NES and NNES) (Curriculum-integrated academic literacy and professional practice).

Part 4 of this chapter addresses the fourth theme (*possibilities and challenges* for integrating an academic literacy development curriculum).

6.3.2 Theme 1: Equity For International Undergraduate Non-Native-English-Speaking Students

The aim of *curriculum integration of academic English literacy development* relates directly to the communication unit's original academic literacy course, which was designed to provide *equity* and, hence, integrated into the first semester of international undergraduate student study programs. The communication unit's original purpose was to address issues of equity for EAL international students, who were entering four STEM-discipline schools in increasing numbers during the 1990s. According to the focus group participants, the unit was continuing to deliver the original EAL course, but it had also made 'in-roads' into other areas of communication, especially formal research writing.

6.3.1.1 Writing-from-sources. Central to the EAL equity program was inducting international students into research skill development at the very start of the course in a carefully structured manner. Initially, the neophytes were shown how to utilise an extract from a source text. This involved practice activities with feedback and a library research session followed by a chance to search for source material relevant to a given topic.

> Ella: Right from the beginning, we give them sources to work with. So they have to work with some set sources and then, having got feedback on how they use them, we send them off to a library research session […] So they've got some practical research skills. [FG-106]

To consolidate their understanding of their initial experience of research activity, the students then had to write a report. This was intended to raise their awareness of the purpose of the exercise by providing a space for them to rehearse their introductory search strategy by explaining it in writing, thereby confirming that they understood that they had been acquiring practical research skills.

6.3.1.2 Argument. The next task took the learners a step further. It was their first piece of scaffolded research writing, in which information from sources found in their library search would be used as 'evidence' in constructing a new understanding:

> Ella: Then they have to do a whole paper, demonstrating how they can take an extract from [one of the three resources] … how you use this bit of evidence [and compare it] to the whole information. [FG108–109]

Thπe small-scale task requiring students to take an extract from a text and connect it with other information presented in the text to make a statement of their own represented a guided induction into the processes of academic literacy within the RSD framework. Students learnt to cultivate their own perspective on aspects of the

technical content and were directed towards representing that perspective using words that they had autonomously chosen. Articulating new understandings derived from their readings was encapsulated by the concept of the writer's 'argument'.

6.3.1.3 Using their 'own words' to achieve academic integrity. The teaching approach to guiding newcomers to use sources in their writing captured the essence of the academic integrity requirement that students must use their own words. This approach involved foregrounding the learners' arguments as the synthesis of various ideas adopted from their readings. Because this synthesis constituted each student's personal perspective, it could only be articulated using words of their own choosing. This approach contrasts with the practice of simply recapitulating portions of a source text via paraphrasing, which has long been a standard teaching method and self-help resource enabling students to avoid plagiarism.

The course introduced EAL students to the issues surrounding plagiarism during one of the earliest lectures [FG-110]. Although students were taught how to *paraphrase* and *summarise*, it was emphasised that dependence on these strategies overlooked a key learning objective for the academic approach to written assignments, namely, cultivating their own perspective by *transforming* rather than *retelling* the relevant information (Scadamalia & Bereiter 1991). By learning to synthesise information from their source texts as data, the international students taking part in the communication unit's EAL course absorbed a key component of *the integrity of academic writing*.

6.3.1.4 Learner Autonomy. The EAL course's pedagogical approach can be understood as an awareness-raising induction for international EAL students into the practices and skills necessary for research literacy. By fostering the neophytes' self-efficacy from the very beginning of the first semester of their undergraduate study, the highly structured tasks introduced students to academic *reading and writing* in a

manner designed to ensure learner engagement. This was enabled by the design of the exercises, which ensured students simultaneously grappled with the *content* and with the *language and academic literacy conventions* of their discipline.

The absent fourth member of the communication unit was responsible for the additional sentence-level English grammar instruction that was necessary for EAL students' language development. The group regarded her work very highly, recognising that her approach to teaching grammar also helped learners develop self-efficacy:

> Ella: The grammar tutorials are brilliant the way she runs them. But they're not just: 'here, we'll fix up your grammar'. She gives them strategies and –
> Lucy: She uses their draft work, helps them in editing their own work –
> Ella: Yes, real skill development around grammar, and where to find resources, and really getting them into control of that learning.
> Lucy: We celebrate the fact that we found a casual, hourly paid person who could perform at a level that we would want, you know what I mean, who could do what we could do, and in *my* case, she could do it a lot better! [FG55–57, 61]

By building the grammar tutorials around students' own drafts, this tutor not only provided 'just-in-time' support that was of immediate use to learners as they applied it to their assignment. It was also for motivating students to follow up and access the additional resources provided. Because they promoted self-help habits, these tutorials helped EAL learners develop their ability to check their own grammar and build their self-confidence in their ability to continue developing *general competence* in formal written English.

6.3.1.5 Integration to Improve Student Engagement. The crucial factor for engaging the international undergraduate students in the EAL course was its position as an integrated subject that was taught and assessed and had a status equal to that of other courses on their first semester curriculum. This meant that the learning and teaching of academic English *language* occurred seamlessly within their RSD and their

introduction to technical *content* relevant to their degree program. Importantly, teaching and assessment represented a staged process requiring learners' active involvement, encouraged by formative feedback.

6.3.1.6 Learner Awareness. Raising learner awareness about not only *what* they had done but also *why* was imperative to accelerating student understanding of the role of research in their learning. This meta-awareness was a starting point for helping learners understand that academic literacy transcends citing and referencing requirements to also include the ways that academic writers establish their personal perspective in relation to their source material and present this perspective as an 'argument' supported by evidence from sources.

The research writing development component of the program-integrated EAL course aimed to establish foundations for international students to further develop their understanding of the *content*, the *language* and the conventions of *research literacy* in their discipline. Regarding whether they *knew* that their reading and writing tasks constituted a research task, Ella responded:

> Ella: Yes, we call it research training [...] just in my undergraduate course, and that's because we've got control over it. I've got no control over my other courses. [FG-187–189]

Ella's control over the EAL course enabled her to direct the learning process, based on her understanding that the learning framework considered research skills and the development of academic language fundamental to understanding learning. Ella's *other courses* – where she did not have this control – were three courses of an international Masters by Coursework program. The next subsection details that situation and context.

6.3.2 Theme 2: Remediation For Non-Native-English-Speaking International Postgraduate Coursework Students

The fundamental premise for the integration of the [STEM-discipline] communication unit's original *equity* course for international students in the 1990s (discussed in the previous subsection) was that the EAL course would be *assessed for credit* towards the degree programs of students who enrolled. Opportunities to diversify the communication unit's work within the faculty were 'invited' or welcomed'(FG-23) by the group on the principle of *integration* of academic literacy via a cycle of teaching, assessment and feedback within the curriculum of a discipline-based degree program.

> Lucy: Where we are involved, it's all formalised, we *don't* run any *drop-ins, or help centres*, or anything like that. Everything we do is *teaching for credit* – with the *exception* of a very recent initiative from the Associate Dean to offer some workshops for the master's students in the writing up of their research projects. [FG25]

The 'recent initiative' that prompted the unit coordinator to make an exception to their basic principle was to agree to provide *thesis-writing support* in workshops that were essentially *adjunct* to (rather than integrated into) the preparatory coursework. However, the request had an outside 'driver'. The discipline's industry advisory body, *Engineers Australia*, which establishes accreditation standards for postgraduate awards, required increased time be allocated to 'communication skills' within the Masters by Coursework degree program.

6.3.2.1 Partial Integration. The group had been involved, albeit in a limited way, in master's courses during the previous two years. They had been given a small amount of time to teach 'into' three of the courses and participate in the assessment process by helping establish literacy criteria. They also contributed to marking and giving feedback on coursework assignments. Because the communication unit

members had been allocated this minimal teaching time within the course schedule and they had successfully introduced an explicit focus on literacy into the marking criteria, their approach to developing academic literacy has been labelled here as *partially integrated* into the assessed curriculum.

Meanwhile, the request for thesis-writing support workshops offered the prospect of increasing the effectiveness of their support for student academic literacy development. By considering the proposed workshops 'a pilot', the coordinator anticipated increasing possibilities for future collaborative development towards more substantial teaching and assessment of academic literacy within these courses.

> Lucy: We're doing this as a sort of pilot for this year, and we'll really teach into three of the master's courses and award marks in there […] so it doesn't alarm me at the moment, but we're only at the leading edge … just doing these workshops. [FG-25]

6.3.2.2 International Students in the Masters' by Coursework Program. The Masters by Coursework program attracted many international NNES students who, being postgraduate students, were not eligible for the undergraduate EAL course. Furthermore, the university's Integrated Bridging Program for international postgraduate students was restricted to research students. This gap in the support for international EAL learners in this STEM discipline's postgraduate coursework program was filled by a course on *Communication and critical thinking*. However, neither the communication unit staff nor any other EAL practitioners or academic language developers had been involved in designing this course, as far as Ella was aware.

6.3.2.3 Teaching 'Into' Three Courses. The communication unit was allocated minimal teaching time within the communication and critical thinking course, and they were given even less time in a second course (on business management systems) [FG-30–34]. A third course, on research methods, was provided entirely online:

> Ella: [For the research methods class], everything that we did had to be online, and we marked two assessments there. Even though they were for marks, they were practically diagnostic, formative type assessments … I can't remember the marks, they might have been 4%, 6% or even – I don't know, 3%. [FG-35 & 37].

The unit members recalled the first assignments they had marked, two years earlier, at the start of their collaborative involvement. As seasoned EAL teachers – and given their limited overall teaching time and the research methods unit's lack of face-to-face instruction in this course – Ella and Susan both expected to encounter considerable issues in the new students' first written assignments. Nonetheless, they expressed surprise at the extent and degree of the *'poor English'* in the postgraduate student assignments and the obvious cut-and-paste *'plagiarism', 'collusion'* and '*recycling'*.

6.3.2.4 'Poor English'. Susan characterised poor English language skills as:

> Sentences that don't make sense [...] no paragraphs, no topic sentences, no nothing – and lots of cutting and pasting, heaps of copying of slabs of text**,** and putting that in, and thinking that that's fine. [FG-66]

Susan identified both weak vocabularies and incomprehensible sentence structures and also a failure to apply the norms and conventions of *academic* writing, such as an appropriate structural organisation of text, especially the verbatim use of 'slabs of text' from sources. Significantly, Susan also found that the students were unaware that cut-and-paste plagiarism represented an issue.

6.3.2.5 Plagiarism and Collusion. There was exasperation in the tone of Ella's comments at the extent of 'cutting and pasting', which indicated how poorly students had understood any of the information they had been given:

> The very fact that they were writing a paper about plagiarism, and citing *you*, [the author]. [All laugh] 80% of them, at least, plagiarised. Not a single in-text reference in sight, even when they're saying, 'it's important to have in-text referencing', you know, taken as a direct quote without quotation marks from one of the documents [ironic laugh]. […] *They didn't get it.* So the disconnect[…] was just phenomenal. [FG-132–134]

Ella reacted similarly to an incident in which two papers featured identical structuring of ideas and identical 'topic sentences', amounting to 'a clear case of collusion'. Ella required the students to write a two-page explanation for their actions. In this explanation, they admitted everything without apparently understanding the problem:

> Ella: They admitted it. Their two-page written explanation was saying: 'we only did this, […] and then we did this, and then we did this'. Perfect definition of collusion. But that was their defence. So they had no idea that what they were doing was not ok. It just blew me away. I mean, how often do you get a misunderstanding with collusion? But we had two, [ironic laugh] because *clearly***,** *it was a misunderstanding*. *They had no idea. Neither of them did. And they were beside themselves.* [FG-135]

6.3.2.5 Misunderstanding language development. The international students involved in the collusion incident were in the second year of their Masters' by Coursework degree, and Ella had introduced them to a language development strategy that involved reusing content-free language from their readings. This proved unsuccessful, as the students missed the point of the exercise entirely. The strategy shares some aspects of the AALD method of 'harvesting' language that had been adopted by the two lecturers, SL-1 and SL-2. Ella's application involved giving students an annotated example of a paragraph from a paper, which would function as a model text from which students could extract 'structural language' to reuse in their own assignments.

Ella highlighted the 'structural language' in bold black font**,** calling these items 'useful language chunks', and rendered the rest of the text in a bright colour. She explained how the students could employ these 'useful language chunks' to develop their own

work, recognising that the 'coloured language' should not be used because it was specific to the topic of the model text. However, the concept of using elements of the text as a model had not registered with the students. In fact, they had seemingly not understood the actual requirements of the assignment:

> Ella: Well, for goodness' sake, *how deluded was I?* It was just – [the students] were talking about the *Hyatt* disaster [the model text], instead of *Challenger* [the set topic] – *and not getting it!* [FG-158]

6.3.2.6 'Recycling'. The previous example suggested a misunderstanding rather than an active attempt at deception. By recycling the content of the model paper, they demonstrated that they had not even understood the *question*. Susan relayed another example of recycling. Occasionally, she explained, a paper was submitted that was not on the set topic but *on a previously studied topic*:

> Previous projects turned up, and we're like: 'We were talking about autonomous driving technology here [in the assignment question] and *you're* talking about robots in hospitals, that's last year's topic!' [FG-159]

In the latter case, some dishonesty was likely involved. Nonetheless, it appeared that the students had again not even understood the assignment topic. The focus group subsequently considered contextual factors detaining these postgraduate students from developing academic literacy to decide how to handle these incidents of cut-and-paste plagiarism, collusion and recycling.

6.3.2.7 Reasons for academic literacy issues among international postgraduate students. For the first assignment in the research methods course, students had to submit a *draft*, and students with problems such as those discussed above were 'called in' for one-on-one tutoring by Ella, who recognised their lack of understanding of the issues at hand. The draft was a low-stakes assignment, representing around 4% of the course's total grade, in advance of a full paper.

Therefore, the group determined that this would be a *diagnostic* assessment, enabling *formative* feedback FG-35]

Plagiarism. Students who were called in for issues of plagiarism, collusion or recycling received one-on-one tutoring advice, which led to the recognition that students' lack of sufficient English and unfamiliarity with the culture of their new academic environment factored into the misunderstandings:

> Ella: For some of them, *it's actually a shock that they can't use another person's assignment* [ironic laugh] [… However,] issues of collusion are very difficult for them […] because they're put into groups and [they] have to learn how to work in teams – so, for some assignments, they're working in groups and then they don't understand how to put the line when they're doing individual assignments. [FG-69–70]

Susan similarly reasoned that the students, although admitted to a Masters-level program, did not yet have the academic skills necessary to understand academic integrity and avoid inadvertent plagiarism:

> Susan: They probably don't have the writing skills, the summarising skills to know how to take collective ideas and write them up in their own words. [FG71]

Ella and Susan both contributed to a deeper understanding of the notion of using one's own words than that signalled by the surface-level approach of paraphrasing source texts. Instead of limiting their teaching to *avoiding plagiarism*, they encouraged their students to develop the ability to construct new knowledge of their own from a collection of ideas found in source texts.

Handling academic integrity. Given the first assignment marked by the group was a draft, Ella was able to handle her students' academic writing issues by providing formative feedback to guide their learning:

> Ella: Because they were practically diagnostics, I did not have such a difficult problem with them, like in determining what do they know when they come to us […] it was very interesting what they *didn't* know. [FG45]

The fact that they were dealing with Masters-level students surprised the group, who did not anticipate the size of the problem:

> Lucy: This is Masters! It's all Masters –
> Ella: Yeah, but that one, I mean that clearly –
> Lucy: I think too, they're struggling.
> Ella: Yeah, and they can't discern, their language skills are so poor, they cannot discern between what is a useful language chunk and what isn't. [FG-160–163]

While discussing their students' written texts exemplifying plagiarism or collusion, the focus group participants recognised, nonetheless, that an appropriate response to their writing was not to reprimand them for their poor English, lack of academic literacy or ignorance of citing and referencing conventions in tertiary-level writing. Instead, they drew attention to contextual factors, including low entrance-level English requirements and the inadequate *time* allowed for learning and teaching, which undermined the effectiveness of the group's teaching strategies.

Entry-level English. Entrance to the university's Masters-level courses for NNES students demands they achieve a Band 6 average on the International English Language Testing Systems (IELTS) exam. For Ella, this score is insufficient for Masters-level study. She also sensed that some students' IELTS scores did not capture their true ability:

> Ella: Their [English] language skills are poor. IELTS 6 is all they need for Masters, and that's not enough to understand the Masters-level stuff, and believe me, a lot of them are not IELTS 6. [FG-62]

Band 6 on the English Language Testing System describes the person as a 'competent user of English', meaning

> Generally, you have an effective command of the language despite some inaccuracies, inappropriate usage and misunderstandings. You can use and understand fairly complex language, particularly in familiar situations. (British council 2019)

This statement predicts the 'inaccuracies, inappropriate usage and misunderstandings' that were found in the Masters' student assignments and provides support for Ella's contention that IELTS 6 is not high enough an entry requirement given the Australian academic environment is decidedly an *unfamiliar* environment for international NNES students.

Time Allocation. Several insights had become clear to Ella. First, the adjunct and partially integrated approach was inadequate for providing the conditions for their international students' academic literacy development. Second, students needed to learn the technical content of their discipline and achieve proficiency in academic reading and writing to avoid the traps of plagiarism. Third, merely informing students what to do without taking the time to guide their attempts at putting the concept into practice was counterproductive to learning.

> Ella: It's about teaching time and how to integrate it. I mean just a stand-up lecture is not going to do it. Because they don't get it. They just don't get it. [FG132]

The time allocated to providing feedback on student work had to be largely devoted to relieving the stress caused by those texts being identified as sites of potential misdemeanours. Students were 'shocked' or 'beside themselves' to find that they had inadvertently transgressed serious ethical boundaries, possibly putting their personal integrity in doubt. Given the EAL teaching expertise of the teachers, time spent in one-on-one tutorials would probably have helped these students overcome the shock of discovering that they could be accused of unethical behaviour.

Both Ella and Susan contrasted the context of the postgraduate coursework students (which did not allow time for a structured introduction to research skill development with the various opportunities to participate in learning activities and receive feedback that were available to undergraduate students in their EAL course:

> Ella: I think we have this problem less in the undergraduate international course. [FG-103]
> Susan: Yeah, and I think that's because we are face-to-face with them, we're engaging with them, and talking with them, and give them direct feedback [FG-104].

Susan is concerned the Masters' students sent to their Unit in their final year had missed the process that the Unit's regular students receive from the start: 'I don't really understand how the Masters' students get any information on tha't. FG-112]

The integrated course for international undergraduate students provides potential guidance on meeting the challenge posed by the lack of time in the postgraduate context in the form of reallocating teaching time.

The next section considers an example of *inclusive practice* that was developed by Lucy in one of the five discipline-specific schools. This involved introducing a fully integrated academic literacy strand into the curriculum of a mainstream undergraduate course for both NES and NNES.

6.3.3 Theme 3: Inclusivity for all students

6.3.3.1 Curriculum-Integrated Academic Literacy and Professional Practice.

Some eight years before the focus group meeting, an inclusive, two-stage approach to academic literacy development for all NES and NNES students was integrated into a discipline-specific course on *professional practice*. The implementation was facilitated by an engineering lecturer who '*got it'*, that is, who recognised the progress of undergraduate EAL students and saw value in taking an *inclusive* approach. Although the communication unit's original EAL course was introduced as a matter of equity for *international* students, the lecturer noted that local Australian students shared many of the academic literacy issues experienced by international students. He recognised that

the specialised language of an academic discipline was equally 'foreign' to local NES and NNES, prompting him to negotiate with Lucy for the full integration of academic writing into a professional practices curriculum

6.3.3.2 Professional Practices Courses. There were two successive professional practices courses, which enabled a developmental approach to student learning because practices introduced in their first year were reinforced and extended in their second year. Classes included around 60 students, about 15% of whom were international students [FG-79]. The literacy focus of the courses concerned formal written texts and formal oral presentations. Some time was also spent on the slight differences in formality between the two. During the first year, Lucy introduced the theory and practice of research writing and academic integrity:

> I have recorded lectures explaining things like the structure of the research discussion paper and evaluation of sources, and register, and cohesion, and then these are all in the online modules as well, an explanation of avoiding plagiarism, and referencing and prevention and things. [FG-91]

As with the EAL equity course for international students, the induction into academic literacy was heavily structured. The first-year course began with a conceptual focus on the structure and language of a research paper. This was followed by a test and then the assignment of a 1000-word discussion paper for week five. Thereafter, the skills they had learned were applied by the students via work leading to an interim report, and a final individual report that was submitted at the end of the semester [FG-91]. The second-year professional practice course allocated 40% of the grade to a 'lab report'. Although Lucy had provided an example highlighting the principles of a report for first-year students, the second-year course used a discipline-specific laboratory report:

> So I show them the structure of a report, with an annotated model, and a list of common mistakes provided by the lab demonstrators, the people that mark it,

> and before that […] I give them access also to the referencing convention. [FG-92]

Student motivation to value developing good communication skills was also fostered by the links to industry that were the crux of these professional practices courses. Lucy would advise students that their communication skills would distinguish them from other engineering graduates and brought industry guest speakers to reinforce her message:

> Outside speakers come in and say to my students: 'This is what will set you apart, this is what we look for'. And I cite the research about the correlation between the communication skills of a practising engineer and their career trajectory. [...] We refer to that a lot. [FG-217]

6.3.3.3 Student Experience. Lucy's teaching methods received substantial positive feedback. Susan reported recently running into a childhood friend who had been working in the field for more than five years since graduating from the university. When she mentioned her current role, 'he said 'ah yeah, with [Lucy]?' – 'Yes, with [Lucy]' – 'Ah she was very helpful'. So, that first year he remembers – years later!' [FG-208]

Lucy had received similar comments. A lecturer from one of the Faculty's other Disciplines, who regularly graded final-year (Honours) reports from Lucy's students, remarked that he had found their reports generally 'much better written' than those produced by students in his own school:

> Lucy: And when he said something to the students about that, they said 'Lucy taught us well' [FG-203] ... What I think is really good is that they hung on to it for two years. Two years is a long time, isn't it? And what's more, they say they link it to the feedback that they got on their writing in the first and second year. [FG-207]

Although the focus group participants were positive about the esteem in which their work was held, they were anxious about the limited effectiveness of their input into the

RSD of the postgraduate students:

> Lucy: In the master's course we're constrained by the amount of time and access we have FG 194],

An there was also some disappointment among the group that their academic literacy work had not yet been extended more systematically across the faculty's different disciplines:

> Lucy: We have made in-roads, if you like, into different parts of the faculty [but] there are some parts of the faculty that we have nothing to do with. [FG-223]

6.3.4 Theme 4: Possibilities and Challenges for Integrating the Academic Literacy Development Curriculum

Thus, the institutional climate within the STEM faculty was described in terms of both the pattern of factors that have *enabled* the communication unit to 'make in-roads' into some parts of the faculty and the pattern of factors that has *impeded* the spread of their work to the rest of the faculty.

6.3.4.1 Possibilities. The problems diagnosed by the group when assessing the first research methods assignment highlighted contextual *challenges* experienced when the approach to developing students' academic literacy was only 'partially' integrated. However, by providing add-on thesis-writing tutorials, the group intended to win over academics unfamiliar with the concept of discourse-level literacy, who were mainly concerned with a sentence-level approach to *fixing* students' grammatical errors. The group recognised that possibilities for *spreading and consolidating* a discourse-level approach to academic literacy, as part of learning to write like researchers, appeared when discipline-specific academics saw evidence of improvements in their students' language and learning.

> Lucy: Our best success has been where we have colleagues – discipline

> colleagues –who *get it*, you know, they don't know how we do it, but they appreciate the value, and they know that we can teach students, give students the tools to make a difference in their language. [FG231]

Writing like a researcher. The original concept for establishing the communication unit within a group of STEM disciplines had been maintained for almost two decades since its original implementation. The original discipline-specific EAL communication course, integrated into the mandatory study program, provided all international NNES students with a research-oriented transition program during the first semester of their studies at this university. The concept's introduction in the 1990s was driven by the perceived need for a transition course to provide international NNES students with the *motivation*, *time* and *guidance* to focus on their English language and academic literacy development. This was set in motion by ensuring that the EAL (English as an Additional Language) course for international undergraduate students built on RSD practices and that it was a credit-bearing course that was fully integrated into the discipline-specific curricula. (Autor's ALL involvement in 1990s negotiation with the STEM Faculty).

The introduction of students into the norms and practices of research writing from their time of entry into tertiary study is aimed at achieving three learning outcomes. First, their research skills would promote a deep learning mindset appropriate for higher education. Second, a focus on research writing would introduce NNES (Non-Native English Speaker) students to the academic vocabulary and grammatical structures commonly used in their disciplines. Third, the course would pave the way for students to develop an understanding of the underlying purpose for mastering the citing and referencing conventions, especially that it would contribute to them becoming members of their discipline's *community of practice* (Lave & Wenger, 1991).

Continuity of curriculum integration of scholarly writing practices. The continuity (over two decades) of the EAL course for international undergraduates and the survival of the faculty-embedded communication unit were attributed to three categories of contextual factors: *first,* external circumstances; *second*, collaborating individuals; *third,* organisational 'visionaries'. The circumstances producing the initial and continuing need for the faculty-based communication unit's work included the growing numbers of international students enrolled in courses in the disciplines of interest and the findings of an industry advisory board regarding the poor communication skills of both international students and local NES graduates. Graduates having poor English communication skills was not only unacceptable to potential employers but also detrimental to the university's reputation. Additionally, a factor that has not always been associated with poor academic literacy but that is nonetheless harmful to the tertiary system's reputation is the perceived growth in the tendency of students to plagiarise.

Collaboration. Collaboration between individuals who are specialists in mutually complementary areas of expertise represents the basic method for initiating and developing curriculum-integrated academic literacy development. According to the focus group, discipline-based problem-solvers and language learning specialists combined their expertise to develop the original EAL course. 'In-roads' into the faculty by the communication unit were enabled by a climate of mutual respect between discipline-based academics and language and learning experts. For example, when discipline academics agreed to integrate assessment of language and literacy into assessment of technical content knowledge, members of the communication unit felt that it indicated respect towards the expertise of language specialists:

> Ella: Sometimes it's just a matter of academic openness, or collegial respect. [FG-234]

Another example of mutual respect between a discipline-based academic and a communication unit specialist was the integration of academic literacy into the professional practice courses for *all students*. Lucy's collaborator trusted her language and learning expertise, reflecting that spirit of 'openness' and 'collegial respect':

> Lucy: That's right. Someone I've worked most with – for eight years now – in both courses – he *started* like that. But he's the sort of natural, he writes well himself, I mean, I didn't have to convince him, or show him, or anything, he just, he – 'got it'. [FG-235–237]

Furthermore, a lecturer who had initially been resistant to the industry requirements of including a language development course became convinced over time by witnessing the improvement in the work of his students after Ella provided feedback on their writing. [FG-243 & 251].

Organisational 'visionaries'. The innovative establishment of the communication unit within the STEM faculty was made possible by senior discipline-based academics who had both the vision to identify possibilities for curriculum-integrated literacy development and the decision-making power to realise them in practice. The unit had been established in the 1990s when the head of one of the discipline-specific schools reacted to the industry advisory board member's remarks, who told him, 'we were totally happy with the technical skills of your graduates, but they can't communicate' [FG-200]. Another factor that ensured the communication unit's acceptance within the faculty was the evidence of improvement in student communication skills, which satisfied both the faculty's discipline-specific academics and the industry advisory board. Some years later, the same school head told Lucy that the advisory board 'had stopped complaining' [FG-202].

Drivers of communication skills. The context in which the EAL students' communication course was first developed and then maintained was characterised by two top-down agents. Although the external driver was the industry advisory board, the innovation was maintained internally by the school heads, who had both the power and the determination to embed the communication unit in the faculty and support its continuation:

> Lucy: Coming from above, it's been directed from Engineers Australia, and from visionary – I would call them – Heads of School. [FG-232]

The second 'visionary' school head, who strongly supported the communication unit's work, not only accepted its value because of the evidence of appropriate learning outcomes but was also interested in understanding how the language specialists' methods functioned:

> Lucy: He also understands, or he says he's had his eyes opened. He's found it very interesting […] in conversations he's had with Susan, particularly about how she does it with students, what she taught them: the strategies. [FG-259].

Tenure. Another crucial factor was that the ALL staff of the communication unit were given tenure within one of the schools of the STEM faculty [author's recollection of negotiations in 1990s]. Thereafter, the continuity of the communication unit was dependent on the long-term personal commitment of key staff members, especially the school heads and other senior academics who recognised that the methodologies applied in the communication unit could make a difference to the discipline-specific language and learning development of both NES and NNES students. The unit's commitment, in turn, depended on the linguistic expertise and prior experience in curriculum-integrated academic literacy of the ALL staff, whose coordinator was initially recruited from the academic development centre where she had been responsible for substantial success.

Receiving continued tenure as leaders, and as language and learning specialists, was crucial for maintaining and growing the integrated approaches. The positive outcomes

that followed the communication unit staff being given the power to design and teach their credit-bearing courses and the necessary timeframe for initiating that development in their students are pieces of evidence by two of the three previously reported approaches. However, despite the myriad successes, it is necessary to consider the challenges associated with the faculty's broader cultural climate and the contextual factors that emerged to block the spread of integrated academic literacy development throughout the faculty.

6.3.4.2 Challenges

Grammar. Discipline-specific academics often perceive language as separate from content learning. This perspective has been ingrained in the tertiary environment and substantially influenced much administrative and pedagogical decision-making in Australian universities, leading academics to resist incursions into the class time allocated to the presentation of discipline-specific content, challenging *attempts to secure a place for academic literacy within higher education.*

This perspective can be explained by the concept that language is 'transparent', meaning that it is possible to see 'through' language to the content (Coffin & Donohue 2014) without awareness of how language functions at the *level of discourse*. Therefore, many academics have tended to fall back on a focus on correct *sentence-level* grammar. This was the case when the communication unit language specialists were given task of marking one lecturer's batch of assignments, who expected that they would 'fix' the grammar and thereby 'solve the problem':

> Susan: The interesting thing with the marking is because it is an outside driver for this communication input into the master's program, we really had to start educating the academics we were working with, because they thought that we would just come in and mark 'grammar', and that was it, we were going to fix grammar, and that basically [giving us] a mark sheet would solve the problem. [FG-48]

The different perspectives on language as communication meant that there were delicate negotiations. While recognising that the discipline-specific academics' concept of tertiary writing conflicted with their own understanding of language and learning, the group simply insisted that 'what we do is *beyond* sentence-level grammar' [Ella; FG-53].

Student, Staff, and Faculty Motivation. The absence of a faculty policy emerged as a challenge for upscaling the integration of academic literacy across the faculty. Some academics, such as Lucy's collaborator on the Professional Practices courses, recognised that linguistic expertise was needed to integrate academic literacy into the content-based curriculum, producing an intrinsic motivation to seek advice and collaboration with language and learning specialists. However, for other academics, the motivation was extrinsic (Ryan & Deci, 2000), as in the case of the lecturer associated with this STEM discipline's postgraduate coursework program. Such academics would only comply when such programs were imposed on them, such as by the industry advisory board funding the master's programs [FG-43].

For Lucy, the external imperative (from the industry) also needed to be reflected in faculty policy to ensure that systematic acceptance of academic literacy reached all students:

> I think it's faculty policy that they need, because … there are people now, who, until it's actually – unless it's forced on them – don't want to know, not necessarily in an antagonistic way, but just 'I'm too busy, I don't get it, I've got so much technical – or *my* content', and then they see it as an *invasion.* [FG-268]

Further challenges included the need to gain acceptance from staff for the idea that academic language development required reiteration:

> Lucy: But how it can happen – first year – it needs to be reiterated, and not necessarily somebody like us standing up in front, or even being inside the

> classroom with every lecturer. [FG-274]

If it were fully accepted and mandated by the curriculum, academic literacy development would be visible and promoted by discipline-specific staff 'at different points in the curriculum' and in the online resources, and this would be mediated by not only the communication unit's language and learning staff but also faculty academics:

> Lucy: Also, I think – it's not just me, that's clear. Someone like an education specialist can get up in front of the class early and teach them and be integrating [it] with the whole curriculum of that course, but then it needs to be assessed every time. [FG-274]

Student disengagement with a need for academic literacy development represents another challenge. This could be addressed by making literacy assessment visible across the curriculum. Retaining explicit literacy development criteria as an integral component of assessment could motivate students by indicating to them how highly the faculty valued the integral role of academic literacy.

6.4 Phase 3: Summary and Conclusion

Phase three was an attempt to broaden the range of views that contribute to an understanding of the academic culture of an Australian South Coast University. While many respondents were tending towards accepting or promoting the development of academic literacy within undergraduate education, some responses also project a sense of hierarchy that privileges the provision of discipline content over the possibility of teaching towards learner self-help and autonomy. Nevertheless, considering the thoughtful comments offered by faculty staff respondents who are patently committed to *critiquing* the status quo and who favour *action* to improve student learning, it is unsurprising that there was substantial consensus surrounding the idea that *academic writing is difficult for students*. However, it is likely that the eleven respondents who

indicated either ‘not sure’ or ‘disagree’ represented a ‘silent majority’ of academic staff that have no time for, or interest in, aspects of language and literacy development that have hitherto been considered remedial issues. That is, the proportion of negative responses to the notion of academic writing as *difficult and time-consuming for undergraduates* would be expected to be considerably greater than the 26% recorded by this study if the same prompt were included in a large quantitative study using a representative sampling methodology. This observation flags a need for the replication of successful approaches in overcoming initial reluctance of discipline staff to engage; and also for demonstrating possibilities for overcoming identified barriers to achieving sustainability for the embedding academic literacy into mainstream curricula as fundamental for undergraduate discipline knowledge construction and development.

In the final chapter a discussion of findings from Phases 1 and 2, on the adoption of the AALD model for learners to accelerate their own academic literacy development. Views held by Phase 3 faculty-based staff on academic literacy development for undergraduate learners suggest both possibilities and challenges for the success of long-term embedding of mediated discipline-specific academic literacy development into mainstream core curricula.

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Chapter 7 Challenges and Possibilities:

Discussion and Conclusion

The aim of the study was to investigate enabling and inhibiting factors for integrating a pedagogy for Accelerating Academic Literacy Development (AALD) into the core curricula of tertiary education. The overall objective of this research was twofold. It was to open possibilities for subject lecturers to (1) overcome barriers to integrating academic literacy development into mainstream curricula, and (2) thereby recognize and articulate for students why language is fundamental to content learning. A further objective emerged from the initial interview with STEM Lecturer-1. It was to investigate whether the AALD model of genre analysis for 'harvesting language' from academic readings might also support the sustainability and possible growth of curriculum integration across a discipline, faculty, or even beyond.

It was to determine characteristics of AALD reasons why the use of a simple model of genre analysis for harvesting language enabled the Teacher as learner to accelerate her own expanded understanding of the need for making academic literacy development explicit for learners as a fundamental aspect of content knowledge development. The 'cultural climate' of a university is here conceived as 'a pattern of factors that would potentially enable or impede the large scale introcudtion of an AALD model for integrating academic literacy development into mainstream curricula'

The two discipline specialists at the centre of this study represent Phases 1 and 2: the first and second generation adopters of the AALD pedagogy into the curriculum of the

year-2 undergraduate STEM course.

As a first-generation adopter, the undertaking for Lecturer SL-1 was, in collaboration with the ALL advisor, to lay a foundation for the integration of AALD into her core curriculum.

The second-generation adopter accepted responsibility for the existing AALD pedagogy. The account of two generations of adoption of this innovation provides a background for the discussion of sustaining the initial integration of teaching undergraduates how to accelerate their own academic literacy development within their core subject.

The two overall research questions (RQ) are revisited here:

1. What factors and conditions created possibilities for the two discipline specialists SL-1 and SL-2 at the centre of this study to adopt, and autonomously maintain, the pedagogy of integrating an approach for Accelerating Academic Literacy Development (AALD) into the core curriculum of a second-year undergraduate course?
2. What challenges and possibilities were identified for a more widespread adoption of academic literacy pedagogy into undergraduate core curricula?

7.1 Possibilities

As noted in this study, ‘blind spots’ represent one of the factors that can be responsible for the resistance by both subject lecturers and students to the prospect of integrating academic literacy into core curricula. However, blind spots can also be an outcome of successful learning, particularly on the part of subject lecturers, as the attainment of their own autonomy as learners. In terms of the autonomy loop of Willison’s RSD-based Models of Engaged Learning and Teaching (Willison, 2020), blind spots can

occur at the stage of mediated learning where scaffolding by the mentor is no longer needed.

Applied to the AALD pedagogy, when the teacher-as-learner has reached a stage of independence that enables her to modify or replicate certain details of the AALD approach, it means that she also *maintains her awareness* of her deep understanding of the underlying principles for accelerating her own learning development . This process is captured in the of two ALTA (Academic Learner-Teacher Autonomy) frameworks described in Chapter 3 of this study.

The first ALTA framework, demonstrating the AALD approach to a simple form of 'genre analysis' (Rothery, 1994) is put to use as a 'tool for students' to learn how to accelerate their own academic literacy development by harvesting and re-using language from suitable model texts. The second application of the ALTA framework posits the *teacher as learner* who, through collaboration with a Learning advisor, discovers the use of the AALD tool as a method for apprenticing students into the key elements of a research article. Thus, each framework demonstrates overcoming their natural resistance to a task that first appeared to be obscure and difficult. The ALTA framework for students and teachers as learners promoted the skills of autonomously accelerating their own understanding and application of the academic language choices, and the use of academic discourse patterns and citing conventions with which the experts of their discipline communicate with each other.

However, it appeared that learning experientially in this way, by participating in co-constructing and co-teaching did not necessarily require articulating the underlying principle in the first instance. Following Vygotsky's concept of the ZPD, for academics who acquire knowledge of the practices and norms of academic literacy intuitively, over time, by engaging in copious reading, their understanding of the practices may build

gradually, intuitively by a process of imitation and may therefore be understood as simply normal. The importance of helping undergraduate students to accelerate that process by a teaching strategy that explicitly support writing-from-sources, and the associated citation conventions could therefore be overlooked as superfluous.

An outline of possibilities for the initial implementation, and the sustainability of the AALD pedagogy, is the first aim of this summary discussion. It is followed by possibilities for a second-generation adoption, with a discussion of the ultimate extension of an AALD approach to learning and teaching across an entire Discipline, School or Faculty as the second and third aims.

7.1.1 Enablers for initial Adoption of AALD Approach

The findings from Phases 1 and 2 indicated that the collaboration between the author as academic language and learning (ALL) Practitioner with the two STEM Lecturers provided each of them with a discovery approach to appropriating the principles of AALD. While interacting with the author / ALL practitioner and with their students, each lecturer, in turn, also built her own knowledge of possibilities for applying the underlying principles of AALD, both within the year-two course and at the level of the students' fourth year (Honours) dissertation.

Initial adoption by STEM Lecturers 1 and 2. For SL-1, the process was kindled by a short Academic Staff Development (ASD) workshop, while the majority of her further ASD occurred experientially as a process of discovery during the collaborative teaching sessions. For SL-2 the entire induction occurred experientially. She began by replicating the existing schedule structure for the four AALD workshops and their spacing within the overall semester-length course. This was followed by coming to terms with the content of the existing handouts, assignment and assessment rubric and online records of the previous year's teaching sessions, and finally, by engaging in the

collaborative teaching of the four workshops with the author, who again assumed the role of the ALL advisor.

It was the potential for exploiting possibilities for fostering learner autonomy which formed the basis of the concept of harvesting language as a conceptual self-help tool for accelerating academic literacy development (AALD). To demonstrate the stages of the mediating scaffold for the learner is progressively withdrawn in order to support their freedom to exercise decisions of their own, this study has drawn on the recurring autonomy loop of Willison's RSD-based MELT approach. The concept of both learner and teacher autonomy in adopting the AALD approach appeared to offer possibilities for addressing three major issues that continue to present barriers to the integration of academic literacy into mainstream subjects for individuals and institutions.

7.1.2 The AALD concept: learner-teacher autonomy.

The AALD concept was persuasive for the two STEM lecturers to adopt as a pedagogical tool and further develop it as their own. Some of this success can be attributed to contextual factors and the STEM lecturers' personal motivations. But it was the simplicity of the condensed approach to genre analysis of the AALD tool that particularly appealed to the two lecturers. They were confident from the start that it could be mastered with ease, and both lecturers immediately expected that introducing students to a self-help approach for improving their own writing in the second year of their degree program would reduce their problems of academic writing for their research paper or thesis in their final (Honours) course two years later. Both lecturers also identified situations where the AALD tool of genre analysis for 'harvesting language' would be useful for teaching the year-2 students, but each with different focus. STEM Lecturer-1 initially adopted it as a framework for supporting the stages of planning an essay assignment, with the aim of engaging students' attention to the

discipline content covered at the start of the course. SL-2 on the other hand, saw the AALD as a 'scientifically well-conceived approach which she could use to explain and help remedy her students' problems (such as vocabulary choices, discourse structure or referencing conventions). It was the simplicity of the AALD approach appeared to stimulate the sense of self-efficacy and consequently the will to independently maintain the pedagogy in the future.

Contextual motivation for curriculum Integration of the AALD for SL-1. The motivation for STEM Lecturer-1 to pursue the possibility of integrating the AALD approach into her content curriculum was stimulated by her reflective practice as academic teacher. She embraced the concept of the AALD without a sense of having to give up any of her academic real estate. Quite the contrary, she had judged the outline of the AALD pedagogy to be compatible with her own key objective of ensuring her students' engagement in their own knowledge building from the very beginning of the course.

Lecturer SL-1 also acknowledged value in providing students with an early focus on formal discipline-specific language development and stated two further learning objectives: the explicit development of skills in reading research articles and in producing academic writing that included informed use of discipline-specific referencing conventions. She grasped the opportunity for initiating students' scholarly writing skills development in year 2, in the hope that the same students would thereby have a basis for optimising the effectiveness of their fourth-year induction into thesis writing. During the three years after the original collaboration (2011), SL-1 therefore also implicitly supported the concept of learner autonomy for life-long language learning by inducting students into the strategy for harvesting re-usable language. While firstly directing students to the fact that the self-help AALD tool could support them in using their readings to modify their writing, SL-1 also explained the principle, and demonstrated

how, in practice, learners could purposefully identify which were the aspects of the written language that could be harvested and safely re-used in their own writing. She also emphasised the usefulness of the conceptual self-help tool for its application in workplace situations. The appeal to workplace literacy became for SL-1 a major student motivator in the introductory session of the four AALD workshops.

Contextual motivation SL-2. While the teaching context for lecturer SL-2, the second-generation adopter of the AALD, differed substantially from that of her colleague, they shared similar experiences of supervising and assessing final-year students' dissertations. Both had their primary focus on content, and SL-2 had, similarly to her predecessor, noted a lack of formal academic communication skills among the fourth-year theses writers they had supervised or assessed. *However, b*ecause her substantive appointment had been as a researcher, her prior teaching experience in her discipline had been limited to work with final-year students whose thesis writing she supervised or assessed. But she admitted she did sometimes 'wish they would have had some sort of instructions early on to practise their writing' and make use of it in their thesis writing' (D2.1a, 8). The context of having to address final-year students' academic language problems had predisposed both lecturers to accept the AALD concept for introducing an early language focus into the undergraduate curriculum. The second STEM Lecturer's motivation to engage with the AALD grew quickly, from a professional determination to do justice to the course with which she had been entrusted, to a personal enthusiasm at the prospect of positive outcomes that would improve the effectiveness of her supervision work with the same student two years later. SL-2 shared her personal background as a non-native speaker of English with the international students and sensed a positive effect of increased trust in her from these students as a result.

Like her predecessor, SL-2 also evinced a personal quality of empathy for the situation of her students. She explained how she appreciated that the AALD writing workshops and associated assignment were designed in a way that maintained the students' focus on course content, by contrasting a negative experience from her own student days, of being obliged to attend an extension module which appeared to have no relevance to her degree program (D2.1, 260)

***Context and motivation summary*.** Both the first- and second-generation implementers of this case study (SL-1 and SL-2) made effective use of the ALL-advisor's expertise and the AALD tool for harvesting language, on which the genre analysis pedagogy for harvesting language from appropriately research-based publications relied. Both lecturers were reassured in their roles by the ALL advisr's initial preparation of the initial work done in 2011, the sequencing of the workshop content, and the construction of information statements and worksheets for each of the four workshops. SL-1 had constructed an assessment rubric. She progressively redrafted the original rubric over time, to strongly reflect the dual focus of reading both for meaning and for language, and SL-2 applied the criteria of this rubric to the assessment of the student essay with precision.

Comments by both SL-1 and SL-2 (Chapter 5) indicated that their active involvement in collaborating, co-teaching, and exercising their own authority to make modifications to instructional aspects of the AALD pedagogy had furthered their own conceptualisations of the role of academic writing in the learning of discipline content. Analysis of the Chapter 5 data revealed that by actively engaging in co-teaching, scaffolding their students' practice exercises with formative feedback, each of the lecturers had confronted their own challenges of engaging their students' focus on the introductory lectures at the start of the Semester. The AALD pedagogy provided a series of four

academic literacy workshops at fortnightly intervals, that were foundationally relevant to the associated essay assignment on the content of the first four lectures. A simple approach to genre analysis, introduced and practiced during the workshops, guided their students' learning of the inter-related elements of academic writing, the content, language, discourse structure and citing conventions. For both lecturer the logic of this method for mediating their students' introduction to the course content through the literacy of their discipline became convincing through the process of implementing it. Their own learning was mediated by the Advisor's presence and co-teaching. Both lecturers also individually reasoned their own way through the challenges they perceived and arrived at their own conceptualisation of the pedagogy, affirmed the basic principles on which the AALD approach was conceived.

7.2 Challenges for Inclusive Practice

On the surface, it appears that personal and organisational barriers blocked the creation of institutional conditions under which subject specialists and academic literacy specialist at Anglophone universities are encouraged to cooperate on a Faculty-wide or University-wide basis. The data analysis (Chapter 6) provides a variety of perspectives on academic literacy held by faculty-based staff who were not part of the AALD innovation. The faculty-based informants provide views that contribute to the internal culture of the university and shed some light on issues preventing the increased uptake, sustainability, and scalability. In the present context of issues for academic literacy development for undergraduate students, the concept of 'challenge' is understood as the beliefs or actions of academics that confront the status quo. There are staff who openly dispute, or implicitly disagree with the status quo, the existing discourse of student deficit and remediation, and, those who accept the challenge, identify it as the problem and purposely set about creating and implementing small

scale solutions with their own classes. Findings from Phase 3 present perspectives on academic literacy development held by a broader range of staff members who were engaged in undergraduate teaching within one or more of the five faculties of the ASCU. Their views were probed on the extent to which they either challenged or accepted existing practices of undergraduate students' development of academic literacy**.**

7.3 Limitations of this study

This longitudinal case study of a phenomenon of the sustained curriculum-integration of academic language, literacy, and integrity relied on a small-scale set of data offered by self-selected participants and gathered within the self-contained context of a single university. A further limitation was the reticence of students to provide feedback and to volunteer for individual or group interviews. While the findings offer a rich picture from the perceptions of willing participants this limitation suggests that opportunities be found for determining the depth of challenges to the from staff perspectives.

More research is therefore suggested to explore the potential of a variety of approaches that combine the simplicity of the AALD for overcoming initial barriers to curriculum integration with implementations of pedagogies of a more complex nature that function at increasingly sophisticated levels during the learners' undergraduate years.

7.4 Conclusion And Future Outlook

The identified key components of curriculum that accelerates student ALD are the elements of reading-for-writing, writing-from-sources, writing-for-learning, and learning-as-researching. This research was an attempt to help staff to ensure that the student who pleads 'teach us how to do it properly' is given the answers they deserve: answers

to the right question, that determine exactly what it is that they should 'do properly' – and the reason why.

The answer to that question should delve below the surface level of re-telling other people's ideas in different words and being honest in order to avoid plagiarism. In particular, it should convert the concept of academic integrity from the current preoccupation with stamping out wrongdoing, to move from a punitive approach, to a genuinely educational one, to fostering the integrity of student learning.

This study was intentionally focused narrowly on the possibilities of overcoming individual and organisational barriers to the acceptance of academic literacy development into a mainstream curriculum. It explored the possibility of the AALD approach for overcoming significant barriers for mainstream discipline academics to adopt the teaching and assessment of academic literacy as an integral component of a core curriculum within their discipline. The findings support the essential elements of the AALD tool for the learning of vocabulary, commonly used word sequences, structural sequences of genres such as laboratory or fieldwork reports; and, importantly, a semester essay where writing requires facility in the thinking routines for writing-from-sources and associated citing-referencing conventions of the discipline.

There were many indicators of successes, and willingness to deal with academic literacy by the informants of the study and in the literature on academic literacy and curriculum integration. But often these require collaboration to continue. In this study, the concept of autonomy in research skill development is a key factor in making learner autonomy explicit and accessible, and therefore offering the possibility that the AALD based pedagogy of genre analysis for harvesting language is self-sustaining.

In conclusion, I return to my summary of the dual role of the AALD framework. Overtly,

its function is to introduce learners to a practical strategy of genre analysis for enabling them to 'harvest language' from discipline-relevant research papers, to accelerate their stock of vocabulary, as well as structure of paper, and its subsets, and the citation conventions. The role of reading for learners in forming thoughts and constructing knowledge is largely undervalued. The need for students to develop their understanding and production of different forms of the communicative language, and to adjust to each new context and circumstance is clear, not only theoretically from studies in language development and pedagogy, but also in practice.

The understanding I gained during my career from assisting local and international university students and staff with learning and teaching academic writing development was that language is easily 'taken for granted', that it is invisible, unrecognised, and therefore ignored. The AALD framework is based on a simplified self-help version of genre analysis that provides both a tool for students and a pedagogy for teachers, and emphasises the ultimate purpose is learner and teacher autonomy. It is the simplicity of the tool that is crucial for initiating learners in the first instance.

The 'call to action' from this study is to pass on the discovery that two generations of subject lecturers managed to adopt, adapt and maintain the collaboratively constructed pedagogy for AALD; and that it may be adopted by further researchers to clarify and extend evidence of how the AALD model may serve the subject lecturers' own original purpose of promoting their students' learning of discipline content by early engagement with the topic from the start of the Semester. It requires pedagogies that initiate the engagement and stimulate the progressive development of their students' competence in the formal, written language, structural conventions, and academic literacy citation practices of their disciplines.

I hope this study may assist willing adopters of the AALD pedagogy to take inspiration from the challenges and possibilities for academic literacy development to formulate their own variations on the practice of genre analysis for harvesting and re-using the language of their disciplines.

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APPENDICES

APPENDIX A1.0: PRE- and POST-ENROLMENT PhD case study timeline: AALD Curriculum-integration: Phases 1,2,3.

2011-2013 Pre-PhD enrolment *		
2011 Sem-1	ASD/ALL Adviser (Researcher)	ASD: AALD demonstration: attended by STEM Lecturer. ASD/ALL Adviser prepares worksheets for 4 AALD Workshops
2011 Sem 2	STEM Lecturer-1 (SL-1)	AALD pedagogy: Collaboration and Co-teaching with Adviser
2012- 2014	STEM Lecturer-1 (SL-1)	Continues & independently further develops AALD pedagogy Intermittent brief contact with Adviser
2014 ASD / ALL Adviser (Researcher) PhD enrolment (half-time)		
2014 Semester 2 PHASE-1	STEM Lecturer-1 (SL-1)	Data Phase 1: STEM Lecturer-1 (SL-1) D1.1 AALD 2014 Interview Advisory meeting requested by SL-1 D1.2 AALD 2014 curriculum documentation [D1.3 AALD 2011 curriculum documentation] *
2015 Semester 2 PHASE-2	STEM Lecturer 2 (SL-2)	Data Phase 2: STEM Lecturer-2 (SL-2) D2.1 AALD 2015 interview D2.2 AALD 2015 curriculum documentation (D2.3 Two student interviews)
2016-17 PHASE-3	Faculty staff perspectives	Data Phase 3 D3.1 Faculty staff survey D3.2 Faculty staff interviews D3.3 Faculty-based ALL adviser focus group
2018	Paper published	McGowan, U. (2018). Integrated academic literacy development: Learner-teacher autonomy for MELTing the barriers. *Journal of University Teaching & Learning Practice*, *15*(4), 6. Retrieved from https://ro.uow.edu.au/jutlp/vol15/iss4/6
2017-2022. Continuing PhD enrolment (half-time) with some disruptions		

APPENDIX 2011 (Pre PhD enrolment)

APPENDIX A1.1(a) AALD Workshop Session-1 Handout
2011 AALD Four Workshops Overview

Learning Objective: By the end of these workshops, you will have learnt a method of *using your readings to accelerate your academic writing development*

Session 1 (August 12) Reading academic articles

How to de-construct densely written, formal academic language.

converting it into an informal, spoken style

explaining to others and to yourself

Session 2 (August 19) Writing an academic assignment: 1

How to analyse a model text which you can imitate for

following the structure (beginning-middle-end)

How to de-construct your assignment task to make a plan

using words / concepts from heading to construct your plan

Session 3 (September 2) Writing an academic assignment: 2

How to analyse a model text which you can imitate for 'common language'

extracting it to re-use in expressing your own ideas academically

How to practise academic integrity: using ideas and quotes from articles and giving detailed reference

practice in identifying 'common language' and extracting it from published texts

practice in re-using extracted language with new content

practice in introducing ideas and quotes from readings as evidence for your own ideas and statements

practice in providing complete reference to acknowledge author of quote and ideas

Session 4 (September 9) Writing an academic assignment: 3 Summary

How to plan and write an assignment

using your plan based on key words in your assignment task

using the assessment criteria to focus on what is required

using some extracted language in your writing

using and acknowledging ideas and quotes from your readings

***

APPENDIX A1.1(b) (Pre PhD enrolment) AALD Worksheet
2011 AALD Workshop Session-1 READING: ‘

Translating’ the Language of Research Articles into ‘Spoken Language’

Sandstone reservoir quality prediction: The state of the art. Joanna M. Ajdukiewicz and Robert H. Lander AAPG Bulletin, v. 94, no. 8 (August 2010), pp. 1083 – 1091 (Excerpts).

	Text – Formal academic written style	Spoken style
1	**CURRENT RESERVOIR QUALITY MODEL CONCEPTS** [pp.1086-1087] The new generation of reservoir quality models are based on burial diagenesis concepts developed since 1990.	
2	As discussed by Taylor et al. (2010, this issue), earlier concepts prevalent in the 1980s held that (1) the extent of porosity loss with depth is controlled by the influence of compaction, with intergranular quartz pressure solution linked to quartz cementation at depth; and (2) deep porosity, where it occurs, mainly results from the dissolution of unstable grains or early nonquartz cements as a result of interaction with migrating organic acids.	*An article written by Taylor (and some other authors) talks about how in the ‘80s people thought that the amount of porosity lost as you go deeper down is due to compaction; also that intergranular quartz pressure is linked to quartz cementation at depth. They also thought that when deep porosity occurs this is mainly due to the fact that unstable grains or early nonquartz cement dissolve because they interact with migrating organic acids* [NOTE The highlighted words are discipline-based concepts. They can be explained as part of the conversion from written to spoken language – Ursula 11/08/2011]
3	By contrast, the current paradigm, built on thousands of petrographic observations from reservoirs around the world is that (1) most deep porosity in conventional sandstone reservoirs is preserved primary, with maximum porosity preserved [p1087] where compaction and quartz cementation are most limited; and (2) most deep quartz cement forms in a slow continuous process related to burial temperature rather than to in situ grain-to-grain pressure solution or to episodic fluid flux.	
4	Two sets of conceptual breakthroughs, one related to compaction and the other to quartz cementation, led to the development of this new view, as discussed below.	

APPENDIX A1.2a (Pre PhD enrolment 2011) **Session 2**
2011 AALD Workshop–2 Modelling overall structureß
"Deconstruction – Joint Construction – Individual Construction"

MODEL TEXT: H. Scott Hamlin, Shirley P. Dutton, Robert J. Seggie, and Noel Tyler (1996). *Depositional Controls on Reservoir Properties in a Braid-Delta Sandstone, Tirrawarra Oil Field, South Australia*

Heading 1: Depositional Controls on Reservoir Properties in a Braid- Delta Sandstone, Tirrawarra Oil Field, South Australia

HEADING 2	**Heading 3**
INTRODUCTION	
	Methodology
	Geological setting
DEPOSITIONAL FACIES	
	Facies Descriptions
RESERVOIR FLOW UNITS	
RESERVOIR ARCHITECTURE	
SANDSTONE COMPOSITION	
	Diagenesis
	Porosity
	Petrographic Controls on Reservoir Quality
SUMMARY OF FACIES-RELATED RESERVOIR PROPERTIES	
DEPOSITIONAL CONTROLS ON PRODUCTION	
REFERENCES CITED	

YOUR ASSIGNMENT:
1. Brainstorm ideas relating to all key words in the heading for your topic

2. Use Models of writing on which you can pattern your own assignment
BUT: decide what is useful and what is not for your topic.

APPENDIX A1.2b (Pre PhD enrolment 2011) **Session 2**

2011 AALD Workshop–2 Modelling overall structure (Teacher's notes**)**

NOTES:

Deconstruction: (in class)

Identifying all headings and subheadings in Hamlin et al. (1996 (above)

Joint Construction (in class)

Your assignment: Sedimentologic Controls on Reservoir Quality: An explanation of the different factors that influence reservoir quality in sedimentary rocks.

NOTE: joint teacher and student 'brainstorm' of key content information for possible assignment headings

Individual Construction

Homework: trial run: Construct some headings for your own assignment.
Submit your attempt for feedback.

NOTE: To use this as a 'model', you must make adjustments to suit the topic you have been set. Models are not meant to be 'slavishly followed' - Ursula.

APPENDIX A1.3a (Pre PhD enrolment 2011)
2011 AALD Workshop session 3(a) Information handout

ACCELERATING ACADEMIC LANGUAGE DEVELOPMENT (AALD) STEM Discipline
SESSION 3: RE-CAP of AALD PROCESS

OVERALL AIM of Accelerating Academic Language Development program:

The aim has been to provide you with a structured opportunity for

1. developing your academic (scholarly) writing skills that are appropriate within *your STEM Discipline*
2. a method for using your readings as models for (1) the structure and (2) the language generally used in the kind (or *'genre'*) of academic writing in *your STEM Discipline*
3. an understanding that you can *use this method for 'genres' of writing* in any other subject areas or walks of life, now or in the future.

LEARNING OBJECTIVE: Learning Objective:

By the end of these workshops, you will have learnt a method of *using your readings to accelerate your academic writing development.*

SUMMARY OF AALD SESSIONS 1 AND 2:

So far, we have looked at the structure and language of two scholarly articles from the *STEM Discipline* literature and practised (in class and with Homework ACTIVITIES):

1. **'Translating'** densely written academic language into more easily understood spoken style language.

   Purpose: You can use it on readings that are dense and difficult to penetrate.

   - This method includes inserting actions (and sometimes people) to help visualise the information that is packed into the specialised language.
   - It is a method that teachers use, when introducing students to new and difficult concepts.

2. **Identifying the structure of the article:**

   Purpose: You can use the structure of your reading as a *model* for planning the structure your own assignment *of scholarly writing*

   - you check how each section relates to the overall topic by:
   - finding how the *key words* from the heading appear at the Introduction and conclusion;
   - and how the key words are found in the sub-section of the body of the article.

LOOKING AHEAD TO AALD SESSIONS 3 and 4

3. We now look at the **structure of individual paragraphs.**

   Purpose: Again, you can use the *structure of paragraphs* of your academic readings as *models f*or the structure of *your own paragraphs*

   - A well written paragraph deals with just one *theme,* or *sub-topic* of the paper.
   - The sentence that states what the key topic of that paragraph is can often be found at the start of the paragraph.
   - It is generally referred to as a topic sentence.
   - The rest of the paragraph elaborates that *theme* or *sub-topic* in a logical way

   ACTIVITY AND Homework: write up one of the paragraphs of your planned assignments, *using paragraphs of your reading as models;* hand up for feedback.

4. Next, we look at the **re-usable language of paragraphs**

   Purpose: This is a way of learning to use language that sounds 'more sophisticated' than spoken language and is common to your discipline, *and to do this without the risk of plagiarising*

   - It is a method for identifying the language that is commonly used in the writing *genres* of [this discipline]
   - To extract common language from a reading to re-use in your own writing you (a) choose paragraphs that you like and understand (no point in modelling yourself on something that is incomprehensible to you) (b) identify all content words using a highlighter or strike-out (c) highlight the rest (d) you can make up a file (on computer, or a hard-copy note-book) to copy out words and groups of words that are 'content free'.

   And finally, we look at specific instances of re-usable language for the purpose of using information from sources (academic articles, books) in your assignment.

   - Introducing a quote (exact words inside quotation marks) with a reference
   - Paraphrasing information – with references
   - Achieving academic writing skills – and thereby avoiding plagiarism

***

APPENDIX A1.3b (Pre PhD enrolment)

2011 AALD Workshop Session 3 Information Handout

Harvesting the structure of an introductory paragraph

Following Weissberg & Buker (1990)
The structure of an introduction

I. General statement about the topic (computers and teaching)
   "YOUR UNIVERSE"

II. More specific statements (previous publications about the topic)
   "YOUR GALAXY"

III. A gap in previous studies (to be covered by the topic of this article)
   "YOUR STAR"

IV. Purpose – detail for topic
   "YOUR STAR" – more specific

V. Importance of the topic
   "YOUR STAR" – additional – optional

Reference:

Weissberg, R. & Buker, S. (1990). *Writing up research. Experimental research report writing for students of English*. Eaglewood Cliffs, N.J.: Prentice Hall Regents. P.22

APPENDIX A1.3c (Pre PhD enrolment) **Session 3**

2011 AALD Workshop Session 3 Introductory Paragraph: Modelling Structure

Deconstruction – Joint Construction – Individual Construction (Rothery 1994)

MODEL TEXT: H. Scott Hamlin, Shirley P. Dutton, Robert J. Seggie, and Noel Tyler (1996). *Depositional Controls on Reservoir Properties in a **Braid-Delta** Sandstone, Tirrawarra Oil Field, South Australia*

Your assignment: Sedimentologic Controls on Reservoir Quality: An explanation of the different factures that influence reservoir quality in **sedimentary** rocks.

Model PARAGRAPH structure **Deconstruction**	Model Text p. 139 **Introductory paragraph**	Planning structure for **your assignment Joint construction**
Identifying structure	**INTRODUCTION**	**Your structure**
1. TOPIC SENTENCE (=key to the whole paragraph)	1. Bed-load–dominated fluvial and fluvial-**deltaic** depositional systems contain prolific hydrocarbon reservoirs.	1.
2. more specific **braid deltas** (a)how formed (b)how composed	2. Many coarse-grained fluvial-deltaic systems can be classified as **braid deltas**, which form where **braided** rivers prograde into lacustrine or marine basins (McPherson et al., 1987).	2.
3. more specific to the topic: **braid deltas** good for exploration (for oil fields)	3**. Braid deltas**, composed primarily of laterally coalesced fluvial and shoreface sands and gravels, are commonly interbedded with finer grained marine or lacustrine deposits.	3.
4. issue to be addressed: (information gap – very little written)	4. Although better sorting and greater areal extent make **braid deltas** more favorable targets for hydrocarbon exploration than fan deltas (McPherson et al., 1987), **braid-delta** reservoirs are not well represented in the literature.	4.
5. very specific to topic of 'this paper'	5. In this paper, we describe geologic characteristics and production controls of an important **braid-delta** oil reservoir.	5.

NOTE: To use this as a 'model', you must make adjustments to suit the topic you have been set. Models are not meant to be 'slavishly followed' - Ursula.

Individual construction: Homework: Use model to write an introductory paragraph for your own assignment and submit it for feedback.

APPENDIX A1.4a (Pre PhD enrolment 2011) **Session 4**
2011 AALD Workshop Session 4 Harvesting Academic Language: vocabulary

1. To harvest language for an introductory sentence
Genre analysis: deconstructing an introduction

Performing a simple form of genre analysis for harvesting language and structure from the introduction of a published journal article in an Education

USING MICROCOMPUTERS IN TEACHING
Rohrbach, N. F., & Stewart, B. R. (1986). Using microcomputers in teaching. *Journal of the American Association of teacher educators in agriculture*, *27*(4), 18-25.
From: Weissberg & Buker (1990), in Chapter 2. pp. 20-24.

Harvesting language from an Introductory sentence: a general statement about the topic (computers and teaching):

> **During the past 40 years, the United States has experienced the integration of the computer into society.**

To harvest re-usable language from this article's introductory sentence, first block out all **content** items:

> <<During the past 40 years, the United States has experienced the integration of the computer into society>>

In class, try this: Insert a set of content words for a different topic e.g the increasing internationalisation of higher education. Insert the following words:

> **30 years** – **the University sector** – **international students** – **its student body**:
>
> << During the past **30 years,** the **University sector** has experienced the integration of **international students** into its **student body.** >>

Points for discussion:

- It may not be safe to take an entire sentence of your essay or report. Why not?
- Alternatively, it may sound clumsy.
- For example, split "has experienced" from "the integration of" and re-use in separate contexts
- Try re-using individual words or word sequences in different parts of your essay.

Reference: Weissberg, R. & Buker, S. (1990). *Writing up research. Experimental research report writing for students of English*. Eaglewood Cliffs, N.J.: Prentice Hall Regents. P.22

APPENDIX A1.4b (Pre PhD enrolment 2011) **Session 4**
2011 AALD Workshop Handout 4.1

What is happening?	Text used as model for language	What is common (re-usable) language? highlighted
1 Topic Sentence	**CURRENT RESERVOIR QUALITY MODEL CONCEPTS**[1] [p1086] The **new generation of reservoir quality** models are based on **burial diagenesis** concepts developed since **1990**.	The **xx (**is/ are) based on **xx** concepts developed since **xx.**
2 Uses Taylor et al as support. Lists 2 beliefs that these authors held.	P1086 As discussed by **Taylor** et al. (**2010, this issue**), earlier concepts prevalent in the **1980s** held that (1) the extent of **porosity loss with depth** is controlled by the **influence of compaction**, with **intergranular quartz pressure solution** linked to **quartz cementation at depth**; and (2**) deep porosity, where it occurs,** mainly results from the **dissolution of unstable grains or early nonquartz cements** as a result of interaction with **migrating organic acids.**	As discussed by **Xx** et al. (year) Earlier concepts prevalent in the **xx** held that **xx** The extent of **xx** is controlled by the influence of **xx** **xx** mainly results from the **xx** as a result of interaction with **xx.**
3 Gives a contrasting view as currently held views.	By contrast, the current paradigm, built on **thousands of petrographic** observations **from reservoirs around the world** is that (1) most **deep porosity** in conventional **sandstone reservoirs is preserved primary, with maximum porosity preserved** [p1087] where **compaction and quartz cementation** are most limited; and (2) most **deep quartz cement** forms in a **slow continuous** process related to **burial temperature** rather than to in **situ grain-to-grain pressure solution or to episodic fluid flux**.	By contrast, **xx** is that most **xx** in conventional **xx** where **xxx** are most limited; most **xxx** forms in a **xxx** process related to **xxx** rather than to **xx**.

What we have been doing deliberately here, is what people learn to do gradually, unconsciously: by absorbing BOTH the content AND the language of their readings, they

[1] Ajdukiewicz, J.M. & and Robert H. Lander, R.H. (2010) 'Sandstone reservoir quality prediction: The state of the art' Joanna M. *AAPG Bulletin*, *94* (8) (August), pp. 1083 – 1091

begin to re-use the structures and ways of writing they are exposed to.

By doing this process consciously and deliberately, you can help yourself and **accelerate your academic language development**. Best of Luck! Ursula McGowan 9/8/201

APPENDIX A1.5 (Pre PhD enrolment)

PLAGIARISM FRAMEWORK. McGowan (2006 / 2013)

This framework is designed to help academic staff in examining the cultural and language factors that may limit the academic expression by a student at any given stage of their transition into university, and in forming realistic expectations of the likely levels of performance on written assignments.

The table charts the typical experience of the cultural and linguistic development of an international student, starting prior to entering an Australian university and tracking their progressive induction into academic life. It does this by considering their experience of culture and language in its various forms. It suggests that there is a relationship between the culture and language that students **experience** (the 'input') and the level of culturally and linguistically appropriate writing they can **produce** in assignments (their 'output').

While the table specifically addresses the experience of international students, much of it may also be applicable to any student who is new to the culture of enquiry and research and language of a particular discipline. See also the RSD - Research Skill Development Framework (Willison & O'Regan 2006) http://www.adelaide.edu.au/rsd/

INTERNATIONAL STUDENT EXPERIENCE

	1. PRE- / EXTRA-UNIVERSITY	2. EARLY APPRENTICE RESEARCHER	3. EMERGING RESEARCHER	4. COMPETENT RESEARCHER
A. Culture	Diversity: Home country vs Australian cultures. Secondary school vs university cultures.	Need for induction into academic culture of enquiry, learning as research, scholarly writing.	Recognition of culture of enquiry, reasons for referencing conventions, i.e. transparency of research steps. See RSD.	Academic values, integrity, autonomy, scrupulousness with data, attribution.
B. Informal English language INPUT	Australian colloquial, peer & domestic chat, TV drama etc. English class text-book and lessons, websites etc.	Spoken: language of lectures and tutorials, peers, one-to-one advice Written: websites, LMS, course guides.	Spoken: language of lectures and increasingly complex tutorials, peers, one-to-one advice Written: websites, LMS, course guides.	Spoken: language of lectures and tutorials, peers, one-to-one advice Written: websites, LMS, course guides.
C. Formal English Language INPUT	Radio, TV news, commentary, documentaries, newspapers, websites, books etc.	Course text-books, academic articles, websites (mainly for content).	Course text-books, academic articles, websites (for content, some language).	Variety of academic genres, articles, books seminar papers, research reports (for content and language).
D. Written English language OUTPUT	School assignments; Social media; Personal: letters, application forms etc.	Mixture of informal and quotations, uncertainty of conventions; awareness of own language inadequacies; inadvertent plagiarism will occur while lacking academic language.	Recognition of writing as part of research; reader provided with information to sources; some uncertainty of conventions; occasional instances of plagiarism.	Use of readings as models for evidence-based academic writing; recognition of common knowledge and language of the discipline; 'harvesting' of discipline-specific language.

© The University of Adelaide - Ursula McGowan 2006, updated 2013

Also published in McGowan 2008:

McGowan, U. (2008) International Students A conceptual framework for dealing with unintentional plagiarism. In: Tim S. Roberts (Ed.) *Student Plagiarism in an*

Online World: Problems and Solutions. Information Science Reference, Hershey, New York, pp. 92-107.

Available to Libraries as an e-Book: https://doi.org/10.4018/978-1-59904-801-7.ch007

APPENDICES B (2014-2015) post–PhD enrolment

APPENDIX B1.1 – 2014 PHASE 1 – STEM Lecturer-1 Interview Questions:

Q 1: You incorporated AALD into your year-2 STEM curriculum with initial assistance from an academic staff. Why did you want to do it? What were your practical and theoretical / pedagogic reasons?

Q 2. What were the high and low points of the collaborative design on the one hand, and teaching of the AALD in 2011?

Q 3. Why did you continue using the AALD - and 'how' as well - why and how did you use it in 2012, 2013, 2014?

Q 4. What modifications did you make to the AALD approach during the three years when you continued to use it, on your own, in your year-2 STEM workshops?

Q 5. What aspects of teaching it were easy? Why?

Q 6. What aspects of teaching it were hard? Why?

Q 7. Were you satisfied with your students' (i) engagement? To what extent?

Q 8. Were you satisfied with your students' (ii) learning outcomes? To what extent?

Q 9. Did you transfer the methodology to other courses? Can you give your reasons?

Q 10. What would you have needed, to help you to apply AALD in other courses you teach?

Q 11. Can you suggest what, ideally, could be done for undergraduate students in your discipline to ensure that they continue to develop their academic language into 3rd and 4th year?

Q12. What is your impression of the actual reading of academic texts that students actually do?

Q 13. What kinds of texts are 'set' or 'recommended' within your [STEM] curriculum?
e.g. lecture notes / discipline textbooks / academic journal articles / industry documents or articles / *newspaper* articles / other

Q 14: the two articles that you used as model text, have you since then included them in their regular reading?

Q 15. Do you have any other comments**?**

THANK YOU

APPENDIX B1.2 – 2014 PHASE-1 – STEM Lecturer-1 AALD Session-1

Workshop-1 recording transcript 5th August 2014 = from the University's LMS:
colou-coded data **EXCERPT**

Transcription – KEY to colour codes
1. CONTEXT & **2. CONDITIONS:** SL-1 aligned with student motivation
3. COLLABORATION & **4. AUTONOMY:** Learner achievement
5. AALD & **6. ENGAGING LEARNERS**: logic, assessment
7. POSSIBILITIES & **8. CHALLENGES**: for sustained integration

		AALD-1 Transcript 5TH AUGUST 2014	
5	0.09	Has everyone got one of these clickers and the two different handouts? If you haven't, they're on the chairs in the front over here.	
6		**Today's kind of lecture - session is a little different to normal**. So I'm not going to be teaching you any new (course) content. **This is all about one of your major bits of assessment. So, the main purpose today is to talk you through that piece of assessments, so you know what's going to be expected of you.**	**AUTONOMY** Learner achievement
7	0.36	The deadline is not until week 9, but you guys really need to start working on that fairly soon, and we're going to have opportunities for talking about this over the next few weeks	**ENGAGING LEARNERS**
8	0.48	So this is all about my letting you know what my expectations of you are for that piece of assessment, and what I'm going to be doing about that to try and help you get there in the next few weeks.	**ENGAGING LEARNERS**
9	0.60	[…] [in those blue course profile -books] you will have seen … there is program … there are some A-A-L-D workshops, and they stand for 'accelerating your academic language development', which sounds kind of – dull – really, doesn't it? but, hopefully it's not going to be for you guys, ok?	**CONDITIONS** SL-1 aligned with student motivation
10	1.22	The main objective of these workshops - this is the 1st one… a few more later on into the semester - and the rest of them won't be a full hour, they'll be a shorter duration) but **it's to give you a few tips and tricks and methods that will help you to be better at reading academic texts**, if that's something that you're not so comfortable with at the moment, because you may not have done a lot of that just now, and also writing in an academic style. So this is all about getting your writing skills on a track for improvement and doing that as quickly as possible.	**AUTONOMY** Learner achievement **ENGAGING LEARNERS**
11	2.03	... some of the things I'm going to be introducing you to in these workshops, some of you may have thought of that already, some of you, most probably won't have done. And some of them are the sort of things that those of us who've studied for years and years, and you go into the workplace, and have to do loads of writing. You kind of accidentally figure out how to do it efficiently. This is all about telling you the ways that we do it efficiently **now**, so that you guys don't have to get it through that process of accidentally figuring it out for yourselves.	**ENGAGING LEARNERS**

[...] **21**	[...] 8.40 […]	So one of the things you will see is that the structure of the writing is worth 20% of the mark. So that's what one of these workshops is going to focus on: how to structure the content of which you write. And the reason I focus on that is that it makes such a difference if you plan out what you're going to write and have a good structure to it. It's going to be a lot easier to read, it's going to be more enjoyable to read, you're going to convey your message a lot better. So that's a really important thing to focus on when you're writing. So, I'm going to try to encourage you to do that. So in one of these workshops, we're actually going to start thinking about the assignment title, and how you may want to structure the content of your assignment. So you've done that before you actually start doing any of the writing for us. Sources and citations, that's also worth 20%. So, appropriately recognising sources of information that you use - that's something that's really important in academic writing; so that's weighted quite highly in here too. Things like the reference list, spelling and grammar, – spelling and grammar are only 5%. That's not the things that I want to focus on here. Obviously, it's important. We need to make sure you get to be proficient at writing with no spelling mistakes and no awful grammatical problems, but that is something some of you will be really great at, but for some of you it going to take you a couple of years to get better at; and I'm not focusing on that here.	Assessment **ENGAGING LEARNERS**: **AUTONOMY:** Learner achievement
22	10.25 11.32 […]	So: while I'd like you to have good spelling and grammar, I'm not going to be picking you up on as much as I am on the way you structure your content and sources, and the way you are putting the assignment together. So if you go back to the first page: the content, to the actual technical content, is worth 25% of the mark that you get for the assignment. So that's a bit different to a lot of the bits of assessments that you will do, whether technical content is worth 100% of the marks, or most of the marks. So that's why I'm spending this time kind of talking to you about what these expectations are, so that you know what you need to do. And the reason behind that is that if you get the **structure** of the content right, and you think about **how** you're going to **write**, then how you **convey** that content is going to be so much better. So the way that you convey the content will improve if you manage to do a good job on all those other things. And because I've explained to you before why writing is so important, and something that a lot of you probably don't like doing so much, that's why I've weighted it so highly in the assessment rubric, otherwise you mightn't bother doing to some extent. Yep –. It's not going to be totally horrible. I promise you that. Even if you're thinking that right now.	**ENGAGING LEARNERS**: AUTONOMY **ENGAGING LEARNERS**: AUTONOMY **ENGAGING LEARNERS**: **CONDITIONS** SL-1 aligned with student motivation

APPENDIX B1.3 2014 STEM Lecturer-1 online information (example)

Background

These Accelerating Academic Language Development (AALD) workshops were first put together by [SL-1] and Ursula McGowan in 2011, with the goal of providing practical tools to help students to develop their academic reading and writing skills. These are rated as being important by employers of professional engineers, and will of course be vital skills to apply throughout your degree and particularly when writing your Honours project. These complement the written assignment (worth 15%), which aims to help focus students in revising course content that has been covered in the first 6 weeks of the course, as well as developing writing communication skills.

In 2011 and 2012, student feedback was that 75-80% of students said that these AALD workshops improved their writing skills. 73% said that AALD workshops improved their understanding of course content.

APPENDIX – B2.1 – 2015 PHASE-2 – STEM Lecturer-2 Interview

Questions: Parts 1 and 2

Part 1 (7.2 minutes) STEM Lecturer-2 interview recorded August 2015

Q 1: Why did you take on the AALD? Bearing in mind there were particular circumstances, what were your practical, theoretical or pedagogical reasons?

Q2 What difficulties have you noticed, or experienced, with the AALD this stage?

Q3: What are the advantages that you see, actually, with this whole methodology?

Q4: The final question for today: Do you believe that students engage with the AALD approach?

FINAL Q: Is there anything else you want to round it off with? I know we've only had a few minutes, but we will have a full-length interview at the end of the semester.

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Part 2 STEM Lecturer-2 interview recorded November, 2015

Questions 1-4 of the November interview re-visit the short interview conducted in August (after AALD workshop sessions 1 and 2).

Q1: Do you have any comment on the assignment process in relation to your objectives for your students' learning during this course? [#38]

Q2: There was a comment about reading scientific papers, about some students who don't like the AALD and think they know how to read scientific papers – and you had your doubts about that. Do you have any evidence of students reading, or not reading scientific papers? [#102]

Q3: If students do not read, do they miss the point that by reading research literature they will absorb the 'reusable' language? Is it perhaps that we did not make the point strongly enough, that without reading they won't learn the written language of their discipline? [#113]

Q4: The question last time was: do you believe that the students engaged with the approach? Do you now, at the end of the semester, believe that students accessed the MyUni recordings of the workshops? [#163]

Questions 5-9 functioned as prompts for both interviewer and interviewee to engage in a discussion of the joint experience of teaching and learning from each other.

Q5: Do you believe the AALD assists your students' learning outcomes, and how? [#171]

Q6: Prompt: [In this context] communication has three structural aspects: the overall structure; the paragraph structure; [and] the sentence structure. And the sentence structure [...] I call it language, but it's the language of grammar [#236]

Q7: Prompt: What I hoped with this methodology is that it does not [...] indicate it must be done this way [#258], but what counts is to go back to the models of your current disciplines [or] of a new discipline, or a of a new workplace. So [the modelling] approach can educate the learner that [the harvesting method] can be applied in different contexts.

Q8 Prompt: Well and here we made it relevant because, although they got all the information from books, from dot-points, from Google, or whatever, but in the end, they also had to

look at - at least two papers to see ‘how it’s done’ and extract the structures to see how it could be done, as a guideline, not as a rule [#264]

Q9 Prompt: Re-igniting that consciousness every so often in different ways, that ‘the reading informs your writing – the language of your reading informs your writing’ so that would be the way I would want to go. [268]

ROUND-OFF: Are there any other comments you would like to make at this stage?

THANK YOU

APPENDIX C (2016) post–PhD enrolment

APPENDIX C1.1 – 2016 PHASE 3 FACULTY STAFF SURVEY QUESTIONS
(using online 'Survey Monkey').

2016 Faculty Survey on University Students' Academic Literacy Development
A. Your area of WORK in relation to STUDENTS

1. My appointment at this University is as
   - Academic staff member (tenurable)
   - Academic staff member (fixed term)
   - Sessional teaching staff member
   - Professional staff member
   - Other
   - Optional comment
2. Gender
   - Female
   - Male
   - Other
3. My usual roles include work as:
   - Program / Demonstrator
   - Staff Developer
   - Student Adviser (learning / writing support)
   - University Education Specialist
   - e-Learning Adviser
   - Plagiarism / Academic Integrity officer
   - Leadership role
   - Administrator

Optional comment:

4. Levels and average numbers of students I am teaching / advising this year (estimated)
   - 1st year undergraduate
   - 2nd year undergraduate
   - 3rd year undergraduate
   - 4th year / Honours
   - Masters
   - PhD
   - Advisory (e.g. learning / writing support)

Optional comment:

5. I estimate that, in my field of work, the proportion of students whose prior education was in a language other than English is in the range of
   - 0-24 % - prior education was in a language other than English.
   - 25-49% - prior education was in a language other than English.
   - 50-74% - prior education was in a language other than English.
   - 75-100% - prior education was in al language other than English

Optional comment:

6. The students I teach, or otherwise interact with, are mainly from the Faculty of (ticking all that apply)
   - Arts
   - STEM disciplines
   - Health science
   - Professions
   - Sciences
   - Other

My School, Department, Init of Centre (i.e. my homebase) is:

B. Your views on coursework students' ACADEMIC WRITING

7. WRITING in a formal, academic style

	Agree disagree (strongly) not sure. (strongly)
Academic writing is difficult and time-consuming for undergraduate students	
is useful because it is concise, densely packed, logical	
is useful because it trains students in their research skill development	
is important because it helps students communicate their knowledge in their field of study	
is important because it is the language of research writing	
is necessary because it helps student to avoid plagiarism	
Avoiding plagiarism is a serious issue for studnts	
Preventing students' plagiarism is a serious issue for staff	
My explanation – optional:	

8. In assessing an undergraduate student's assignment, I would look for the following characteristics of ACADEMIC LITERACY in order of importance

	Most important	— — —	Least important
Correct grammar			
Writer's reason for introducing source material from the literature (e.g.as evidence for- argument			
Method for introducing quotations or paraphrases			
Use of appropriate referencing format			
Use of discipline vocabulary and 'academic style'			
Writer's argument, writer's 'voice'			
Structure of the text, logical flow of the argument			
Correct spelling, punctuation			

9. I estimate that the proportion of undergraduate students at university who NEED SUPPORT in academic WRITING is in the range of

- 0-24% need academic writing development support.
- 25-48% need academic writing development support
- 50-74% need academic writing development support
- 75-90% need academic writing development support
- All need academic writing development support
- None need academic writing development support

Optional comment:

10. My observation about SUPPORT for coursework students in academic WRITING development: (NB comment box expands)

11. Students I teach of advise are REQUIRED to perform and submit formally WRITTEN assignment tasks (estimated number per semester)

Written assignments required	none one. two three or more	N/A
undergraduate 1st year		
undergraduate 2nd year		
undergraduate 3rd year		
4th year (Honours)		
Masters		
pre-Bachelor or pre-enrolment		
advisory (e.g., learning / writing support)		
Optional comment:		

C. Your views on coursework students' ACADEMIC READING

12. Students I teach or advise / supervise are expected to READ one or more academic journal ARTICLES

Written assignments required	none one. two three or more	N/A
undergraduate 1st year		
undergraduate 2nd year		
undergraduate 3rd year		
4th year (Honours)		
Masters		

pre-Bachelor or pre-enrolment		
advisory (e.g., learning / writing support)		
Optional comment:		

13. Reading academic articles

	Agree (strongly)	not sure	disagree (strongly)
Reading academic is too difficult and time-consuming for undergraduate students			
is useful for extending students' knowledge of course content			
is important for research writing			
can be useful for coursework students to use as models for structuring an argument			
can be useful as models for language used by expert writers when introducing evidence for their argument			
can be useful because academic articles demonstrate how factual statements are supported with 'evidence' from the literature			
can be useful for helping students to learn how expert writers cite and reference to avoid inadvertent plagiarism			
My explanation – optional:			

D. Your views on INTEGRATING academic READING and WRITING development into mainstream discipline CURRICULUM

15. To integrate scholarly reading and writing into a MAINSTREAM CURRICULUM as an assessed item could have advantages (ticking all that apply

- for student
- for staff
- for the institution
- for none of these

optional comment

16. My view on this comment: "Coursework students' academic READING and WRITING development is best facilitated by discipline specialists in collaboration with a language advisor"

- strongly agree

- agree
- not sure
- disagree
- strongly disagree

optional comment

17. In my view the INTEGRATION of academic READING and WRITING into a discipline CURRICULUM presents the following challenges (NB Comment box expands):

18. My CONCLUDING comment about undergraduate students' academic 17. In my. Development (NB Comment box expands):

THANK YOU SO MUCH FOR CONTRIBUTING TO MY PhD RESEARCH DATA!
If you would like to talk to me further on this topic, or join a focus group, or a semi-structured interview, please feel free to contact me by email: ursula.mcgowan@adelaide.edu.au

Best wishes
Ursula McGowan

NOW PLEASE CLICK "Done' BELOW TO SUBMIT YOUR SURVEY

APPENDIX C1.2 – 2016 Faculty Staff Survey follow up DISCUSSION

Four respondents volunteered to talk individually about the content of the survey.
Respondents: Dr. Mel, Dr. Anne, Dr. Sam, Dr. Fred (pseudonyms)
An individual session (of approximately one hour) was organized for each of the four volunteers. The sessions took the form of collegial discussions.
The questions discussed ranged freely over the topics raised by the Survey question

APPENDIX C1.3 – Focus Group / DISCUSSION QUESTIONS

Participants: Lucy, Ella, and Susan (pseudonyms)
Data transcript # given where applicable.

Q1: My first question about the background to your role in (this STEM Faculty).
So, you represent a small unit of ALL Advisers who are responsible for language in this faculty, is that right? [#22]

Prompts: How many courses do you do give? [#26]
- for international students? [#29]
- for local students? [#72]
- undergraduate and postgraduate?

Q2: Do you teach language and literacy / communications skills?
Prompts: which contexts of communication?
- written? spoken? [#81]
- what form do these courses take?
- how do you deal with issues of grammar?
- how do you deal with cut-and-paste writing?

Q 3: Citation practices: what problems for students do you encounter?
Prompts: How can students be helped to learn
- why academic writing differs from informal writing [#177]
- the function of citation practices in academic literacy
- the function of citation practices in academic integrity

Q4: Can you suggest, ideally, what could be done for undergraduate students in your area, to ensure that they *continue* to develop their academic language over three or four years?" [#260]

THANK YOU