How critical information literacy challenges Chinese international research students: a content analysis of their literature review documents

Jinghe Han

Abstract
The standard of research papers and theses produced by international bi- or multilingual students troubles their native English speaking supervisors. Most concerns have been focused on students’ genre issues such as wording, English grammar, sentence structure and connection of paragraphs. However, particularly in literature reviews, students need to know how to critically present the information of other researchers to serve their own needs. This aspect has been largely overlooked. This paper explores how a group of Chinese international Higher Degree Research students made use of information in their research writing. The nine participants were studying for a research Masters Degree in Education in an Australian university. This study involved a content analysis of the initial drafts of their literature review. Evidence reveals that the students were challenged in their critical information use. This includes evaluating information in their research context; synthesizing information to construct new concepts; transforming information to accomplish their specific purpose, and in presenting information to suit their reader.

Introduction
One of the challenges in the education of international higher degree research (HDR) students with English as an additional language is developing their capability to produce ‘scholarly arguments that make original contributions to knowledge’ in their research thesis.¹ An assumption is that an IELTS 8 or above is sufficient for students to write an English version of their thesis. Reviewing and using other scholars’ work continues throughout research students’ entire study programs. Therefore research education must prepare students’ critical information literacy, particularly how to synthesize, evaluate and critique information in English in the pursuit and preparation of their theses. Eckel² argues that ‘It is no longer enough to assume that graduate students received this training [education]
when they were undergraduates or will learn it on their own’. However, there has been a lack of research on what critical information literacy needs HDR students have, during their research studies and who has taken or should take the responsibility to educate them.

Critical information literacy is a concept located within the fields of library and information science. It is an extension of information literacy that moves beyond the basic research skills of finding and evaluating information, to the critical use of information in ‘context’. It encompasses the ability to ‘reframe conventional notions of text, knowledge and authority that reflects social, political and economic ideologies within an historical context’. As a socio-cultural information practice, critical information literacy occurs through ‘a site [the context or a field] of social, rather than as a reified and decontextualized set of skills, cast adrift and remote from the discourses’. Within this site, nuanced and embodied understandings are shared, and beliefs and values are added to collective practice. To have HDR students engage with critical information literacy, research educators must be active agents in the context where students attain competencies in interpreting and producing information valued in academia.

Literature

Studies examining the information literacy needs of both international and local HDR students have been conducted mainly in the fields of library and information science and have therefore represented the perspectives and skills of these professionals. Further, much of the literature concerning information literacy from this viewpoint assumes librarians rather than research supervisors play a key educational role. Many have also focussed on students’ basic information literacy needs, that is, information searches, access and retrieval. These studies have provided a narrow focus on ‘the acquisition of skills instead of [focussing] more broadly on the learning of discursive practices within the context of an academic discipline’.

Consequently, research students’ critical information literacy needs have been largely overlooked and unaddressed, that is their need for training to know how ‘to evaluate information and to critique its relevance…to their context, to understand how to integrate relevant and appropriate information with what they already know to construct new knowledge’. Librarians have been the target of criticism in both the information science and education fields. For example, Elmborg has concerns that librarians lack an ‘extensive knowledge of pedagogies and of the cultures and discourse communities of higher education’. Similarly, educational researchers Luke and Kapitzke have critiqued librarians’ view of knowledge [or information] as being ‘external to the knower, existing as a thing-in-itself, independent of mediation and interpretation’. They suggested that information literacy education be embedded into the context of information use in order to develop students’ capacities to critique and construct knowledge.
In the area of HDR education international students’ misuse of information is often regarded by their supervisors and other academics as a plagiarism problem, either by plagiarizing others’ content or structure. This misuse of information has also been theorized from the perspectives of students’ language, culture and writing styles. Given that research students review a large quantity of resources (in their literature, methodology and theory reviews) throughout their study, they need to be explicitly educated to recognize both the epistemological conventions of critical information use in their specific research field and the writing conventions in English that shape new knowledge. This dual focus requires research educators to consider ‘an application of genre theory to information literacy instruction to yield critical information literacy’. Simply addressing research students’ genre problems without looking into their critical information literacy needs is not educating them to make critical use of the large quantity of resources they review throughout their research studies.

Research into information literacy of HDR students from the perspective of library and information science has been limited to their training in basic information literacy skills. On the other hand, the existing studies by educational researchers have not identified information literacy as an issue for international HDR students in research education. Rather they have targeted students’ cultural differences, language and writing skills, and resultant plagiarisms. In response to these two major limitations, this research explores the critical information literacy challenges confronted by international HDR students from China as they fulfilled the requirements of a research degree.

**Method**

**Design**

Chinese HDR students who were undertaking their research Masters degree in education at an Australian university in 2010 were invited to participate in this study. After completing two months of their research program, the participants were asked to submit one review summary of an article they had read relating to their research topic, each week for eight weeks. The research was designed to collect data relating to students’ information use, in the early stages of their studies.

**Data Analysis**

As this research involved textual investigations, content analysis was employed in the data analysis. A rubric was developed that outlined the criteria for data analysis (see Table 1) by integrating Halliday’s genre theory and the American Information Literacy Framework. To ensure the accuracy of the data analysis, the researcher referred back to the original sources cited by the participants in their review summaries, including punctuations.
### Table 1 Rubric developed for data analysis

<table>
<thead>
<tr>
<th>Genre perspectives</th>
<th>Integrating genre and information use (representative items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Representational dimension</td>
<td>Can students synthesize the selected information to serve their themes, topics and research questions?</td>
</tr>
<tr>
<td>Topic sentence issue</td>
<td>1.1 Using topic sentence to indicate what key information has been reviewed</td>
</tr>
<tr>
<td>Theme issue</td>
<td>1.2 Starting with the students’ own theme or the theme of the original author’s?</td>
</tr>
<tr>
<td>2. Interpersonal dimension</td>
<td>How do students position themselves in the text they produced?</td>
</tr>
<tr>
<td>Ownership</td>
<td>2.1 Reflecting the students’ ownership (rather than the original author/authors’ ownership)</td>
</tr>
<tr>
<td>Patch writing</td>
<td>2.2 Representing a consistent genre in the review document</td>
</tr>
<tr>
<td>Modality</td>
<td>2.3 Positioning themselves to the original author/s and their reader in their review</td>
</tr>
<tr>
<td>3. Textual dimension</td>
<td>Can students organize information in an effective way?</td>
</tr>
<tr>
<td>Connectives and conjunctions</td>
<td>3.1 Have the students used conjunctions or connectives to link the information from different resources?</td>
</tr>
<tr>
<td>References</td>
<td>3.2 Have the right references been used (e.g. following old-new information flow)?</td>
</tr>
<tr>
<td>Structuring clauses</td>
<td>3.3 How do they structure the primary and secondary information in a complex sentence?</td>
</tr>
<tr>
<td>4. Critical dimension</td>
<td>How does the new knowledge impact on the students’ own value systems?</td>
</tr>
<tr>
<td>Analysing direct quote and analysis</td>
<td>4.1 Have they selected the ‘scholarly’ quotes/‘plain’ language quotes? Do they analyse the direct quote in their context?</td>
</tr>
<tr>
<td>Evaluation: making judgment</td>
<td>4.2 Have they used evaluative language/words in reviewing others’ ideas?</td>
</tr>
<tr>
<td>Making argument</td>
<td>4.3 Has the analysis of others’ work led to their own argument?</td>
</tr>
</tbody>
</table>

Adapted from Halliday\(^{19}\) and ACRL\(^{20}\)

Evaluating the students’ review summaries against the criteria listed in the above rubric had two purposes. Firstly, the students’ work samples were evaluated as demonstrating appropriate or inappropriate skill in the language use as specified in the rubric. Frequency scores (%) were calculated for each criterion. Secondly, the in-depth content analysis aimed to explore and explain the international HDR students’ identifiable needs in their language use in terms of:

1. synthesizing the main ideas from the information selected to construct new concepts (ideational/representational);
2. communicating their presentation effectively to the reader (interpersonal);

3. organizing and incorporating information selected into their research context cohesively (textual); and

4. determining how the new knowledge had an impact on their own value system and how it can be used effectively to accomplish their research purpose (critical).

Findings

A total of ninety paragraphs were collected from nine students by the end of the eighth week. Nine hundred and three items of information use in the students’ review summaries were identified (Appendix 1). The overall rate for appropriate information use was twenty-two per cent. The two most frequent problems identified by the data were: students not being able to position themselves as an author (interpersonal dimension); and being unable to add their value system to what they had reviewed (critical dimension). From the ninety paragraphs, only nine (10%) were accompanied by the participant’s analysis and comments, and eighty-two (91%) of the paragraphs were written without the participant writer demonstrating their authorship. The following section displays and analyses some representative excerpts selected from the data.

How students addressed their own themes or topics

The students’ draft documents indicated they were frequently distracted by the original resources and could not concentrate on their own themes and topics. Often they started a statement with the theme of the original author’s rather than paraphrasing or summarizing it to address their own focus/themes. For example:

It is popular to watch other countries’ television programs due to worldwide satellite and more importantly, solving of language barrier by subtitling (S1). Subtitling in native language is informative for the audience because it enables them to increase their comprehension and knowledge of a second language (S2). Three different kinds of information are provided through subtitling: “the pictorial information, the original sound track, and the translation of the text in the subtitles.” (S3) (d’Ydewalle and Van de Poel, 1999, p. 228). (Student A)

The student generated three sentences based on the original. In S1, the main clause conveys ‘watching television has become a popular way in receiving worldwide information’, which is positioned as the theme of this sentence; ‘subtitling’ is positioned in a subclause which demonstrates its supplementary status. In S2, ‘subtitling’ is positioned at the start of the sentence (theme) which is also the main clause. The student proposed a new
theme ‘three different kinds of information’ in S3, however ‘subtitling’ was again relegated to a subclause position. Each sentence contains ‘subtitling’ which indicates it is the focus of the paragraph. However, two out of three times the student structured this focus word in a supplementary position. This causes an inconsistency between the structure and the content of this paragraph. That is, the subclause carries the main idea, whereas the main clause carries the supplementary point.

International students with English as an additional language are often criticized as unfocused writers.21 This reflects an information use issue: students need to apply appropriate judgement to know when to adopt and when to change the structure of the original to suit their own context. This was a common/frequent challenge for these Chinese HDR students as shown in the following excerpt:

The ‘rules’ of language cannot be effectively taught because of the complexion of the grammar (S1). Activities or tasks given in the project can maintain the engagement which is benefit to develop grammar competence (S2). The planners of the Bangalore Project consider task-based language teaching as the most effective method of learning and using grammar and developing the internal system of this competence (S3) (Demetrion, 1997, pp. 2-3). (Student B)

In this paragraph, the student included three sentences containing three different themes: the rules of language; learning activities and the planners. These information pieces were selected from two pages of the original. Instead of restructuring the chosen sentences to reflect her focus on ‘grammar’, she was distracted by and followed the original structure. Her capacity for using external sources to serve her own purpose is not demonstrated in this work sample.

How students positioned themselves in the review

The data indicated that the students need knowledge in positioning themselves as an author in reviewing the work of others. For example, in their writing the students often started their statement with ‘according to [Author]; [Author] said…; [Author] argues …’ after which there was no comment to indicate their position. This results in a failure to establish an appropriate interpersonal connection with the reader:

Liu and Lo Bianco (2007) demonstrated via their longitudinal study into the Chinese teaching in Australia that it takes considerable time for foreign learners of Chinese to accomplish a high level of language skills (S1). Lu Ning (cited in Liu & Lo Bianco, 2007) proposed that “basic communication skills, listening and speaking” rather than “book knowledge” (p. 102) should be given privilege for the beginning Mandarin learners (S2). Chao (cited in Liu & Lo Bianco, 2007) holds that speaking
in learning Chinese was elemental and essential than allocating a huge amount of time in learning characters(S3). Liu and Lo Bianco assumed that eliminating Chinese characters teaching from syllabus can help the learning process of that language, decided by its’ nature of “relatively straightforward nature of spoken grammar, lacking tense, aspect or case making … and the shared word order with English” (Liu & Lo Bianco, 2007, p. 103)(S4).

(Student D)

This paragraph is composed of four sentences and the starting point/the theme of each sentence is ‘Liu and Lo Bianco’, ‘Lu Ning’, ‘Chao’ and ‘Liu and Lo Bianco’ respectively. By structuring the information this way, the student focused on those names rather than on their ideas. She neither provided any comment regarding the authors nor their ideas. The paragraph therefore does not establish any interpersonal connection between the writer, the original authors, and the reader. To position herself as a reviewer and a writer, the student will need to display competency in providing comments on the information that was reviewed.

Another feature that demonstrated inappropriate authorship by the students was the tendency to ‘patch’ together both the genre of different original resources and their writing style. An example of how this challenge and the resultant inconsistency of genre and writing style within a paragraph, follows:

Morrison (1993) argues that by being immersed in a context over time not only will the salient features of the situation emerge and present themselves but a holistic view will be gathered of the interrelationships of factors (S1). Such immersion facilitates the generation of ‘thick descriptions’, particularly of social processes and interaction, which lend themselves to accurate explanation and interpretation of events rather than relying on the researcher’s own inferences (S2). The data derived from participant observation are ‘strong on reality’ (S3) (Cohen et al. 2007 p 405). So the good thing is for the researcher to spend more time with the participants, he/she will be able to see the change of the participants in a period of time (S4). (Student C)

This paragraph contains four sentences. A large number of words indicating nominalization are retained in the first three sentences (for example, explanation, interaction, observation, immersion, inference). The genre in this part of the writing is ‘academic’ due to the impact provided by the original text. Sentence four (S4) is the student’s summary with no nominalization use. On the contrary everyday language (so, good thing, spend, and see) is used, which is more akin to a spoken rather than written style. The genre inconsistency makes the paragraph disruptive and disunified for the reader. Criticisms of ‘patch writing’ by international HDR students22 further supports the need for explicit interventions by research supervisors in addressing this issue.
Further analysis of the data indicated that in paraphrasing and summarizing the literature, some students did not demonstrate the ability to position their status and power appropriately in relation to the reader. They tended to use high or medium certainty or obligatory words. In the following paragraph, words such as ‘have to’, ‘should’, ‘is/are’ and ‘will’ were used excessively:

Interest is always (high certainty) the best teacher for students (S1). However, the teacher-centred and difficult abstract knowledge will (medium certainty) demotivate students in learning language (S2). Based on his English teaching experience in Hong Kong, Cheung (1999, p. 55) indicates that it is (high certainty) important to provide interesting materials and relevant knowledge to students’ daily life because these can (low certainty) help students apply what they have learnt to real life and increase motivation (S3). Encountering with popular culture is (high certainty) a good way in learning language process, to motivate students to become responsive and active learners (Cheung, 1999, p. 55) (S4). The strategies of using popular culture in teaching are (high certainty) essential to acknowledge for teachers (S5). As “enthusiasm is infectious”, the teacher has to (high obligation) be enthusiastic, warm, affective and have rich imagination (S6). So students will (medium certainty) be more likely (medium certainty) to engage with the subject (S7). The way of presenting of popular culture should (medium obligation) be positive and enjoyable, but also with linguistically competence and meaning, so that students can (low certainty) not only generate affective responses but also gain significant language knowledge (Cheung, 1999, p. 56, 59, 60)(S8).

(Student A)

This paragraph is composed of eight sentences. High certainty or obligation words appear five times; medium certainty or obligation words are used four times, and low certainty words are used twice. By using higher or medium certainty or obligation words more frequently, the student positions herself as having a high level of commitment to the information. This leaves less room for disagreement which indicates to her readers that she has a high level of expertise and is not willing to negotiate with other points of view.23 Interestingly this tendency can also be viewed from this paragraph’s original resource:

“We teach materials should be ‘something that students can relate to’ and ‘within their interest level’” (Cheung, 1999, p. 57)...
“The use of popular culture in teaching creates a relax classroom atmosphere and more enjoyable as students are engaging in activities they like”. … “The teacher needs to be enthusiastic, warm, understanding, stimulating and imaginative, so that students are more likely to like the subject” (Cheung, 1999, p. 58).
“If English activity and exercise are meaningful and interesting...
to students, they will have an immediate goal to achieve. Many students can recite the lyrics of popular songs without difficulty, but find it hard to memorize a poem or a formula. They learn those things without effort” (Cheung, 1999, p. 58). “It should allow students to interact with one another, and to exchange information, attitudes and feelings. … Teacher’s presenting of popular culture should be in an enjoyable, linguistically competent and meaningful way, which can help to generate a lot of affective responses and imagination from students. Popular culture is essential to their personal and social identities and provides them meaning and satisfaction.” (Cheung, 1999, p. 59)

The author of this original text was a Hong Kong Chinese writer who also included many higher certainty and/or obligation words such as ‘should’, ‘is’ and ‘need’. Two contentions can be proposed from this issue. Firstly, Chinese-speaking background writers are more likely to use high certainty and/or obligation words in their argument. This has been supported by research in psychology which contends that Chinese people were more definitive in their thinking compared to western people. Secondly, these Chinese HDR students have not demonstrated the ability to position themselves appropriately in relation to their readers. Therefore they heavily ‘borrowed’ the style of the original information they referred to.

How students organized the selected information

Constructing a literature review requires the production of a meaningful text, not collecting random pieces of information. When a writer or a reviewer organizes and incorporates the information of others’ into his/her own research context, he/she needs to demonstrate the ability to link the pieces of information in a cohesive and efficient way, ensuring an old-new information flow. However, further data analysis revealed that these Chinese HDR students tended to present information in an ‘unfolding way’ which proved to be uneconomical and inefficient. Specifically, in their literature review the most important information was often presented at the end of a paragraph accompanied by excessive amounts of less significant information preceding the key idea/s. For example:

As the result of the interplay of US foreign policies, immigration policies, socio-cultural ethnic group relationships inside the US, educational concerns, civil right movements, economic factors, and national security issues, among others (S1-a), Chinese has acquired different statuses in various of the society overtime (S1-b) (Wang, 2007).(Student E)

This one-sentence paragraph is made of two clauses. The subclause (S1-a) is positioned at the first half of the sentence and continues for three and a half lines. It carries some insignificant information. In comparison the main clause (S1-b) which bears the primary meaning of the paragraph is
positioned after the subclause. This is not an efficient way to organize the information. To reach the primary idea, the reader has to take a long journey through the lengthy supplementary information. This type of ‘unfolding’ presentation can distract the reader from the most important information. The data demonstrated that some of the students lacked the knowledge and strategies to explicitly connect pieces of information cohesively.\(^\text{26}\) This resulted in the development or sequencing of ideas being quite vague for the reader:

Language teaching is not just about teaching linguistic competence, but also teaching culture (S1). Moloney (2008, p. 12) suggests that intercultural competence is also necessary knowledge that language learners need to gain (S2). Intercultural competence can be defined by Moloney (2008, p. 12) as “the ability to reach a shared understanding of meaning by people of different social identities” (S3). It is not aimed to make learners become native speakers, but to build up their competence as a non-native communicator (S4) (Moloney, 2008. p. 16). (Student F)

This student had combined four pieces of information from Moloney. In this instance she commenced S1 with language teaching (which is about teaching linguistic competence and culture), and moved to S2 on intercultural competence (which is necessary for the language learner). She then followed with a definition of ‘intercultural competence’ in S3. In S4 she addressed the aim of language teaching (to educate learners to be non-native communicators). ‘Because’ can be used in S2 as it indicates a cause-effect relationship between S1 and S2; the text connective ‘namely’ can be applied in S3 to indicate S3 is clarifying the idea contained in S2; ‘however’ can be added to S4 to make a concession with what was stated in the previous sentences. Therefore it can be revised as follows:

Language teaching is not just about teaching linguistic competence, but also teaching intercultural competence (S1). This is because intercultural competence is necessary knowledge that language learners need to gain (S2) (Moloney, 2008, p. 12). Namely, the learners need to achieve “a shared understanding of meaning by people of different social identities” (S3) (Moloney, 2008, p. 12). However, this is not aimed to make learners become native speakers, but rather to build up their competence as a non-native communicator (S4) (Moloney, 2008. p. 16).

Although these information pieces are related to each other, the student fell short in providing the necessary signals to alert the reader to this logical relationship. This common problem in the literature review drafts indicates that HDR students need to be supported in constructing information into a united text. An additional example was recorded by student A:

Despite the motivation issues, popular culture also contributes to the developing of an awareness of the social needs, personal growth
and personality development of students (S1). As Harmer (cited in Cheung, 1999, p. 60) says, language teaching is not just about teaching language (S2). It is necessary to bring students’ daily life and interest inside, so that students will have the feeling that they are able to achieve something and realize the need to use the target language in realistic situation (S3) (Cheung, 1999, p. 60). (Student A)

In this paragraph, S1 focuses on the functions of popular culture; S2 switches to language teaching; S3 introduces ‘bring students’ daily life’ into language teaching. The reader may notice the focus ‘slipping’ from one to another. A careful reader may find that there are internal connections between these information pieces (bringing popular culture which students confront in their daily life, into language teaching). However, this interrelationship of the ideas and the structure of the information paraphrased and/or summarized was a similar challenge for Student A as it was for Student F. Other examples of this problem were identified throughout the data, which flags the support needed by international HDR students from China in producing a united text.

The old-new information flow was another writing skill which was poorly utilized by the participants. Specifically, in the example below, new information was presented without anaphoric or cataphoric reference:

Prabhu’s (1980, 1984, 1987) Bangalore/Madras Communicational Teaching Project influenced the procedural syllabus in the early stage, but was dropped quickly (S1). In a procedural syllabus, tasks should be designed challenging for students (S2). The difficulty of the tasks is above the ability of the students which students should take efforts to complete the tasks (S3). When accomplishing such tasks, students will focus on both meaning and linguistic forms of the language (S4). The gap of opinion or information grows out of the tasks might enhance learners interest (S5). “It is important that learners perceive a task as presenting a reasonable challenge, that is, as difficult but feasible” (S6) (Long & Crookes, 1992, 36). Learners might learn through trial and error in difficulties (S7). (Long & Crookes, 1992, 36) (Student G)

The ‘Bangalore/Madras Communicational Teaching Project’ was considered by Student G as appropriate to her research context. Interestingly, there was no introduction to foreground the relevance of this Teaching Project in either previous paragraphs or connected to any part of this current paragraph. The reader is confronted by information placed in a primary ‘theme’ position in the opening sentence of the paragraph which is not developed further.

How students used information critically

Further data analysis demonstrated some students’ inability to add their own value system to the existing information/knowledge. In particular, they needed the knowledge and skills to decide what type of information
should be paraphrased with comments and what should be kept as direct quotations. Their knowledge of how to make use of direct quotations was not evident. For example, some key concepts, significant theories, and/or classic pieces of writing were paraphrased in their literature review whereas less important statements that should be rewritten were often kept as direct quotes:

“One of the major differences between first and second language acquisition is the fact that all normal human beings achieve proficiency in their first language, but manifest great variation in the degree to which they acquire second languages” (Schmann, 2006, p. 209). This fact leads to “one of the most persistent questions in the study of bilingualism is why some people learn a foreign language quickly and thoroughly while others with the same opportunities fail to learn” (Schmann, 2006, p. 209). (Student H)

This paragraph contains two direct quotations from Schmann. The student wrote ‘This fact leads to...’ as a means to link the two quotes, with each original sentence then quoted verbatim. However, some of that original text was not specifically relevant and somewhat ‘plain’. The student was unable to recognize that the content rather than the form of the language was worth keeping. Rather than use direct quotes modestly and synthesize some of the text,27 Student H patched chunks of the original, the outcome of which did not serve her specific argument. Interestingly, in the same student’s literature review, other key concepts and theoretical statements were paraphrased into plain language, but once again the skill to paraphrase the ideas into a unified text was lacking. For example:

There are many definitions about social capital. The most popular one was given by Bourdieu. He defines social capital as a collection of present and future resources. These resources are connected to ownership of a long term network which can be organizational or personal level of friendship in social contact (Bourdieu cited in Portes, 1998, p. 3). (Student H)

(The original quotation is “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationship of mutual acquaintance or recognition”)

The paraphrasing of Bourdieu’s definition of social capital was attempted by the student with the use of a Thesaurus in a ‘translation-like’ process. The reader might be more interested in reading the original of this concept as presented by the world renowned sociologist. However, due to the student’s limited knowledge of critical information literacy, she was unable to decide which information should be kept as a direct quotation or which and how it should be paraphrased.
Another difficulty for the students in using direct quotations was that they often used a number of quotes, the majority of which were not accompanied by any critical comment. For example:

Turner-Bisset (1999) points out that “a related concern is that it has an individualized conception of teachers and their teaching repertoires”. Banks, Leach, and Moon (as cited in Turner-Bisset, p. 42) suggests that:

Beginning teachers have to relate their subject knowledge to the “communities of practice” found in schools: particular versions of school schemes, commercial texts and interpretations of National Curriculum Orders. What holds these various forms of knowledge together is the students’ “personal subject construct” (1999).

Buchmann (as cited in Turner-Bisset, p. 43) finds that practicing teachers as role models, the contexts in which student teachers are placed, and “the folkways of teaching” have some part to play in the formation of knowledge bases for teaching (1999). (Student I)

In this paragraph, the student inserted two direct and one indirect quotation, from three different sources. These three quotes highlighted three different topics: a concern about an individualized conception of teachers and teaching, beginning teachers’ subject knowledge, and the formation of knowledge bases for teaching. There was no explanation about how these three topics related to each other, and there was no critical synthesis and evaluation of what these information pieces meant to the student herself and/or her research context.

**Discussion and conclusion**

This paper analysed the literature review (draft) documents produced by a group of Chinese HDR students as they undertook their research studies. The findings revealed that the challenges confronted by these HDR students at the commencement of their studies were not solely related to grammar, genre or writing style. Their challenges were in the critical use of other scholars’ works in their research context. The excerpts from the students writing revealed that they heavily relied upon the original resources, and modelled the original author’s structure and style. Most of the students were unable to demonstrate competency in synthesizing and evaluating the information selected to serve their own specific purpose; communicating and presenting information appropriately to the reader, and organizing and incorporating information into their research context cohesively.

Although critical information literacy is a concept in the fields of Library and Information Science, as a socio-cultural practice, it should be extended to specific disciplines and contexts where information seeking and critiquing takes place. The conventional idea that support for international HDR students should focus on language, genre and writing styles, de-contextualizes...
their difficulties and denies HDR students the opportunity to develop their critical information literacy skills relevant to their research context.

International research students from Asia have experienced a different socio-cultural practice. It is complicated for them to develop their critical information literacy in an unfamiliar western institution. Within their institution these students must adapt and develop critical information literacy valued in western academia. However, they may not have received information literacy education when they were undergraduates or have experienced challenges when learning these independently. Therefore it is insufficient to locate the practice of critical information literacy only within the domain of Library and Information Science. Supervisors must be in the context where strategic pedagogies and interventions are implemented to support international HDR students and their critical information literacy development.

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**Endnotes**


8. E. Gide and M. Wu, ‘Strategies to teach information technology courses to international students as future global professionals: an Australian case’, *Procedia*

15. M. Simmons, ‘Librarians as disciplinary discourse mediators: using genre theory to move toward critical information literacy’.


20. Association for College and Research Libraries (ACRL), *Information Literacy Competency Standards for Higher Education*.


27. R. Harris, ‘Anti-plagiarism strategies for research papers’.


### Appendix 1:
**Frequency of ‘appropriate’ or ‘inappropriate’ information use by students**

<table>
<thead>
<tr>
<th>Integrating genre and information</th>
<th>Representative items</th>
<th>Appropriateness*</th>
<th>Total items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Appropriate N (%)</td>
<td>Inappropriate N (%)</td>
</tr>
<tr>
<td>1. Representational: (synthesizing selected information to serve their own themes/topics)</td>
<td>1.1 Using topic sentence to indicate what key information has been reviewed</td>
<td>25 (28)</td>
<td>65 (72)</td>
</tr>
<tr>
<td></td>
<td>1.2 Starting with the students’ own theme or the theme of the original author’s?</td>
<td>12 (13)</td>
<td>78 (87)</td>
</tr>
<tr>
<td>2. Interpersonal: (positioning themselves in the text they produced)</td>
<td>2.1 The presentation of the student writer’s ownership of what is reviewed</td>
<td>8 (9)</td>
<td>82 (91)</td>
</tr>
<tr>
<td></td>
<td>2.2 Positioning themselves relating the original author/s and their reader in the review (including the use of high certainty/obligation words)</td>
<td>14 (16)</td>
<td>76 (84)</td>
</tr>
<tr>
<td></td>
<td>2.3 Representing a consistent genre in the review document</td>
<td>36 (40)</td>
<td>54 (60)</td>
</tr>
<tr>
<td>3. Textual: (organizing selected information in an effective way)</td>
<td>3.1 The use of conjunctions or connectives to link the information of various resources</td>
<td>5 (17)</td>
<td>25 (83)</td>
</tr>
<tr>
<td></td>
<td>3.2 Organization of the primary and secondary information in complex sentences</td>
<td>37 (28)</td>
<td>97 (72)</td>
</tr>
<tr>
<td></td>
<td>3.3 The use of anaphora references (e.g. following old-new information flow)</td>
<td>7 (37)</td>
<td>12 (63)</td>
</tr>
<tr>
<td>4. Critical: (adding their own value system to the new knowledge)</td>
<td>4.1 Selection and analysis of the ‘scholarly’ / ‘plain’ language quotes</td>
<td>29 (32)</td>
<td>61 (68)</td>
</tr>
<tr>
<td></td>
<td>4.2 The use of evaluative language in reviewing others’ ideas</td>
<td>18 (20)</td>
<td>72 (80)</td>
</tr>
<tr>
<td></td>
<td>4.3 Leading the analysis of others’ work to their own argument</td>
<td>9 (10)</td>
<td>81 (90)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 (22%)</td>
<td>703 (78%)</td>
</tr>
</tbody>
</table>

*Appropriateness refers to a demonstrated ability by the student to use the representative items.