Easing into Research Literacy through a Genre and Courseware Approach

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Abstract

The present research results from a reflection on the researcher's teaching procedure in her research writing course for undergraduate English majors in an EFL context. The paper offers a conceptual framework with a genre and courseware approach embedded and outlines the pedagogical procedures on which the framework is based. The researcher used a campus web-based learning platform to build up her teaching materials in teaching an e-course. Research skills, language components and content knowledge were phased into the course syllabus to progress in a systematic order. In addition, she sought to reply to the genre theory set out in the literature to support a genre awareness, which aims to make learners recognize the communicative purpose, structure and linguistic features of research papers. Another important goal of this study was to evaluate the proposed teaching approaches through empirical data. Open-ended questionnaires and interviews concerning the research writing course were given at the end of the semester. The results provided some evidence of the effectiveness of genre structure knowledge in organizing and developing content. The courseware reduced students' class tension and consolidated genre knowledge introduced in class. The interview results provided a reflection of the need of most students for research literacy and skills.

1 Introduction

The term 'EAP' (English for academic purposes) originated in the 1970s. It is concerned with those communication skills in English, which are required for study purposes in the formal education system (ETIC, 1975, cited in Jordan, 1997, p. 1). Study skills are viewed as one of various components of EAP. A narrower view of study skills refers to the more mechanical aspects of study (e.g. reference skills, the use of libraries, the layout of dissertations and theses, the use of footnotes and bibliographies etc.; cf. Robinson, 1991) – in other words, conducting research and writing academic papers.

Research writing requires students to gather information from a variety of sources in order to present that information in a form appropriate to a specific subject area and to cite the sources used in preparing the report. As a consequence, the syllabus for research writing should focus not only on information structures and language conventions of the genre but also on the dynamics of the composing process (Raimes, 1985). However, there has been little discussion on EAP in an English as a foreign language (EFL) context in literature reviews on research writing course design. For example, in their research, Jordan (1997), Johns (1997, 2001) and Hyland (2000) rarely addressed the EAP issues from the perspective of an EFL context.

1.1 The course background

In Taiwan, most English departments require their students in the graduating year to undertake a small-scale survey and evaluate the English majors' research writing as a concrete presentation of their English literacy after 4 years of learning during college. However, there have been very few writing programs catering to the academic needs of undergraduate students. A series of composition courses currently provided at the undergraduate level, ranging from 2 to 3 years, are aimed at strengthening students' writing ability in a progressive way. The progression involves the sequence from building better sentences, to writing paragraphs, to writing essays of various rhetorical styles (e.g. narration, causes and effect, and comparison and contrast, etc). Nevertheless, there is still a big gap between writing for general purposes and writing for academic purposes with particular reference to a study on a subject domain, as the latter goes beyond expression of thought and opinion.

The course, entitled "Research Writing", is a 2-credit hour required course at the undergraduate level for 4th year students. The class meets once a week for two hours. The participants in this study were a class of 24 students at high intermediate to advanced proficiency levels majoring in English at a college in southern Taiwan. While these English majors were quite proficient at reading, speaking and listening to English, they had some difficulty in writing, and in particular with writing research papers in English.

Two textbooks were used: *Writing Research Papers* (Lester & Lester, Jr., 2004) and *Form and Style* (Slade, 2004). The former contains a complete guide to organizing the major sections of a research paper, with Internet sources listed. The main purpose of the latter is to familiarize learners with language conventions such as style, quotations, systems of documentation and mechanics. A list of other textbooks and handbooks were provided as references.

The class lectures were given mainly in a networked classroom and sometimes in a multimedia lab equipped with 56 Windows-based computers.

The overall instructional objectives were threefold:

To master the genre structure characterizing research papers.

To familiarize students with style requirements in academic papers.

To develop the research skills involved in writing papers.

1.2 Purpose of the study

In informal interviews and private conversations with colleagues, the researcher found that several common difficulties facing a research writing teacher are the rather limited instruction hour (i.e. only 2 hours a week), large class size (for example, in the researched context, one teacher usually supervises 25 undergraduates at a time) as well as high workload in marking and providing feedback on each student's draft. In view of such constraints, the present pedagogical framework has thus been developed by the teacher-researcher, whose concern was how to effectively equip EFL novice researchers with moderate research literacy within a short time.

This framework incorporated a genre-awareness approach and courseware into the research and writing task. Research skills and linguistic features were embedded in and disseminated in turn at different phases of the syllabus. Such a framework forms a methodology for research writing instruction, in which each element has its own rationale and theories to support it. The research purposes generated by the delivery approaches involved were therefore twofold:

To understand students' general attitudes toward the integration of the two approaches, genre-awareness and courseware, and their respective role in enhancing writing ability.

To evaluate the proposed teaching framework through empirical data.

The specific questions under investigation were:

Does a genre and courseware approach help students to improve their research writing?

What problematic areas do EFL novice researchers encounter while conducting research and writing a paper, and how are they solved?

2 Literature review

2.1 Genre

Swales established genre as an independent concept in applied linguistics, especially in English for specific purposes (ESP). According to Swales (1990), a genre can be briefly defined as a class of texts characterized by a sequence of segments or 'moves' with each move accomplishing some part of the overall communicative purpose of the text, which tends to produce distinctive structural patterns. Genre analysis is the study of the structural and linguistic regularities of particular text-types and the role they play within a discourse community. Nwogu (1991) further specified the definition of 'move' as "a text segment made up of a bundle of linguistic features (e.g. lexical meaning and illocutionary forces etc.), which [gives] the segment a uniform orientation and signals the content of discourse in it" (p. 114). Each move is taken to embody a number of 'constituent elements' which combine to constitute information in the move.

Swales' introduction to genre has stimulated quite a number of further genre studies (e.g. Bhatia, 1993; Flowerdew, 1993; Dudley-Evans & St. John, 1998). Among the research trends, some surveys have focused on the relationship between genre studies and academic literacy development in tertiary education as well as methods of imparting relevant genre knowledge to non-native speakers in academic and professional contexts (e.g. Johns, 2001; Jordan, 1997). Genre-based pedagogies have particularly emphasized raising the awareness of non-expert members of a genre community of conventional structures. Swales (1990) proposed that in identifying recurring discourse structures such as moves and steps and discourse markers in genre-specific texts, such a language analysis enables students to raise their genre awareness and "facilitates their participation in their disciplinary discourse communities" (p. 213).

It has been claimed that genre awareness has several advantages such as enhancing learners' performance in discourse communication skills, benefiting learners in their professional roles, and promoting a higher level of intellectual quality in lines of logical thinking (e.g. Hyland, 2000; Mustafa, 1995; Johns, 2001). Considering the importance of the concept of genre, the question of how genre awareness can be realized in classroom activities follows. Section 3 will describe how learners passed through an exploratory process and learned to recognize different moves by identifying the purposes of the text segments they perused and the linguistic means through which these moves were realized.

2.2 Courseware

With the rapid development of network technology in the 21st century, computer use has become more and more widespread and seemingly indispensable. The learning/teaching of English as a second and/or foreign language has been in the vanguard of computer-assisted language learning (CALL). One of the main advantages of CALL programs is that they foster autonomous learning as students can study in their own time and at their own speed (Levy, 1997). They also provide a flexible learning environment (e.g. in a distance-learning mode) and thus overcome a place constraint (Rosenberg, 2001). The third benefit is a less stressful learning situation when students work on their own without peer or teacher pressure (Jiménez & Pérez, 2002). Several studies regarding the role of computer courseware in the EFL/ESL classroom have proved that multimedia technologies are conducive to the acquisition of certain language skills such as listening, speaking, reading, writing, vocabulary and grammar, etc. (Chen, 2003; Kung, 2002; Lin & Lee, 2002; Nagata, 1998; Oladejo, 2002). As a consequence, more and more language institutions, schools and teachers base their teaching on computer courseware.

Courseware broadly refers to educational software designed especially for classroom use. It is usually associated with networking, multimedia and hypermedia, distance-learning, e-learning and computer-assisted instruction, and such. One of the steps in implementing CALL is to decide which courseware is the most appropriate one for the language skills to be developed during a particular

period of time as per a syllabus. Instructional courseware can generally play two roles in terms of its use: "the all-encompassing managerial role" and the auxiliary role (Lasagabaster & Sierra, 2003, p. 295). In the former role, the courseware forms the core and acts as a substitute teacher while in the latter it is used as an assistant. It is the auxiliary role that was analyzed in this paper. Courseware used as an assistant can be further divided into two application occasions. One way is to combine a traditional lecture with online teaching in the class itself. More specifically, the contents of both textbook(s) and courseware are delivered in class. The other, designed for self-study, is to reinforce what has been learnt in class. In this regard, instructional courseware is used exclusively outside of the class as supplementary materials. As far as the application setting is concerned, this research took both paths: the courseware was sometimes utilized in a networked classroom in conjunction with a class lecture, but it served mostly as an aid for students to pursue more relevant content information after class.

Toma (2000) warned that courseware cannot be simply bought and left on a shelf. He further suggested that courseware be fully integrated in the program of instruction. With regard to courseware design, according to Toma, a distinction must be made between mediatizing, multi-mediatizing and re-multimediatizing. Mediatizing is the direct use of any media (e.g. sound and image) as a way of expressing oneself. Multimediatizing is the choice of a multimedia support to express a didactic informational content. Re-multimediatizing is a follow-up of learners' activities and appropriate modification of the courseware. The third notion is in particular related to the courseware used in this study. It allowed constant revision and updating of materials, and most of all, students' work was taken into account. In this respect, Section 4 will shed light on it in more detail.

3 The classroom application of genre awareness

As suggested, the first aim of the course was to raise the students' awareness of the generic and structural features of different genres and to empower them with the strategies necessary to replicate these features in their own production. To accomplish this, they were given eight published research articles based on the collection of empirical data. It was assumed that information derived from direct data collection often follows a standard format and hence is easier for research beginners to imitate. The 24 students were then asked to identify some of the structural characteristics by working on the mini-corpus of eight texts in small groups. In line with Swales (1990), sample texts in the corpus were analyzed into moves, corresponding to the stages of research. Although the constituent elements in moves may be variously labeled, students eventually managed to identify five communicative categories which seemed to be essential and which most empirical research papers included in one way or another. Evidence from the texts analyzed shows that five moves normally embody the following types of information:

Move One: An Introduction
a. Presenting background information
   i. Indicating the importance and validity of the problem chosen for study
   ii. The potential contribution of the study
   iii. The need for research
b. A clear and concise statement of the problem, together with the research scope
c. The theoretical framework within which the investigation was conducted
   i. Basic assumptions of the study
   ii. Definition of terms

Move Two: Literature Review
a. Calling attention to the most important previous work
b. Identifying the place of the present work in relation to other research
c. Delineating areas of agreement and disagreement in the field
d. Evaluating and interpreting existing research

Move Three: Research Method
a. Referring to the nature of the sample
b. Referring to the sources of the data
c. Referring to the procedures followed in gathering and analyzing the data

Move Four: Results and Data Analysis
a. Reporting research outcomes, including negative as well as positive results
b. Indicating the significance of main research outcomes
c. Conducting and comparing present and previous outcomes

Move Five: Discussion
a. Evaluating and interpreting the data
   i. Explaining (un)expected results by exemplification, deduction, hypotheses and
    justification
   ii. Practical applications of the findings
   iii. Implications of the findings
   iv. Limitations of the study
b. Formulating conclusions
c. Suggesting further research

It was stressed in class that the moves and elements listed above were by no means discrete components of each paper, nor did the researcher-teacher attempt to get them to set up a complete move structure for a typical research paper. It was simply to provide students with an easy way into writing research papers. As to the training details, Appendix 1 shows an example of a series of classroom exercises, which were intended to help students become aware of a research genre. As research papers are a highly conventionalized genre, learners have to be familiarized with the conventions governing information structuring and appropriate use of this particular genre in order to master it (Jordan, 1997).

Following genre awareness, students were directed to pay attention to two basic systems of documentation: the note-bibliography system and the parenthetical-reference system. The former format presents bibliographical information in footnotes or endnotes and in a bibliography. The latter system, which may use either author's name and page number (MLA) or author's name and date of the work cited within parentheses (APA), includes documentation in parentheses within the text and in a list of works cited (Lester & Lester, Jr., 2004). The following is an excerpt from the class handouts (Lester & Lester, Jr., pp. 303-304).

> Verb tense is an indicator that distinguishes papers in the humanities from those in the natural and social sciences. MLA style uses present tense when a cited work is referred to. In contrast, APA style uses past tense or present perfect tense. The APA style does require present tense when the results are discussed and when established knowledge is mentioned.
> MLA style:
> The scholarly issue at work here is the construction of reality. Cohen, Adoni, and Bantz label the construction a social process "in which human beings act both as the creators and products of the social world" (p. 34). These writers identify three categories (pp. 34-35).
> APA style:
> The scholarly issue at work here is the construction of reality. Cohen, Adoni, and Bantz (2002) labeled/ have labeled the construction as a social process "in which human beings act both as the creators and products of the social world" (p. 34). These writers have identified three categories (pp. 34-35).

In the next step, the students were asked to check whether they could identify any lexical items which seemed to correlate with the generic structures listed above. They succeeded in identifying a number of lexical items which most frequently occur in the form of the present perfect tense or

past tense in the APA style in the literature review section. Here are some of the verb forms found by the students.

raise (issues)	(dis)agree	advance	admit	criticize	defend	quote
report	focus on	offer	question	examine	state	note
maintain	proclaim	suggest	survey	discuss	mention	conclude
indicate	identify	stress	prove	comment	point out / to	come up with
imply	label	lay stress on	describe	propose	argue	hold
provoke	differentiate	produce	present	pinpoint	analyze	specify
apply	show	define	claim	believe	find	refer to
assume	Provide	name	consider	distinguish	explain	answer
regard	interpret	construct	derive	Infer	view	employ
designate	evaluate	introduce	recognize	draw	mean	illustrate
depict	make sense of	denote	reject	cast doubt on	refute	observe

In the development of arguments, students identified these connectors.

In contrast	Conversely	However	Nevertheless	On the contrary	On the other hand
In addition	Apart from	Besides that	Furthermore	Moreover	What is more
Not only that	On top of that	Consequently	Hence	Therefore	Thus
As a result	Accordingly	In other words	Likewise	Similarly	By the same token
In like manner	To conclude	In summary	To put simply	In short	Last but not least

Other linguistic clues identified by the students in the Data Results section include:

support	seem	explain	sustain	detect	speculate
favor	ascribe to	due to	skeptical	in line with	significantly different
involve	observe	substantially	apparent(ly)	relationship	correlation
result in	opposite to	reach	tend to	incline to	consistent with
suggest	show	indicate	in contrast to	as is evident	as is illustrated
represent	measure	summarize	express	Tabulate	simplify
treat	divide	derive	account for	Predict	lend support to
obtain	ignore	perform	interpret	Express	reserve
highlight	obviously	As shown	result from	it is worth noticing	

According to Swales (1990), the genre-based approach is not just an attempt to chunk texts into identifiable knowledge structures. It is also concerned with characterizing the linguistic features of each 'move' and the means by which information in the moves is signaled. It was expected that in this way, a genre-awareness approach could give the students a firm foundation in writing research papers.

4 The e-course

The term, 'e-course', in this research is an umbrella term. It generally means five things which may be used interchangeably: (1) the course online (2) the content materials put on the campus web-based learning platform, (3) a website, (4) a delivery approach, and (5) courseware for the purpose of learning.

4.1 The e-course platform

The e-course platform in the researcher's school was set up in 2002. The software used, Wisdom Master, was originally designed as a course management system for distance learning courses. It allowed teachers to enhance and expand their curricula within and beyond the physical classroom. Therefore the online course platform with formulated templates provided teachers with a teaching materials authoring system that was easier than establishing a website.

With the aid of software such as PowerPoint, Front Page, Cyber-Link Photo Impact and Power Director etc. (Lin & Lee, 2003), teachers could put their lecture materials and students' work in multimedia formats into the e-course. In addition, the e-course contained a hyperlink system in which all teachers had to do was to type a web page address which they would like their students to navigate through. The whole courseware appeared like an on-line textbook (see Fig. 1). As students entered the homepage of the courseware, they could find course descriptions, tables of contents, announcements, discussions, tests, activities and assignments. Students were provided with a campus network access account immediately after they enrollment. Thanks to the registration system, teachers were able to record each student's online learning behavior.
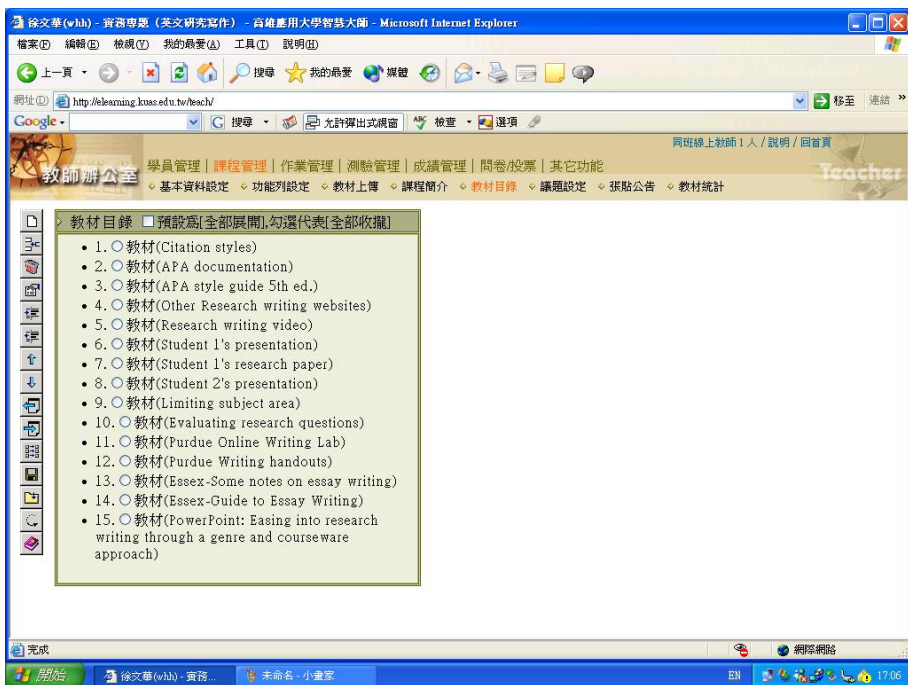

Fig. 1: e-course

Teachers could edit their materials, mark students' assignments, monitor students' logins and online activities and make announcements at any time and from different places (e.g. at home or on campus). Furthermore, the e-course system was flexible enough for teachers to replace an exercise or some items in an exercise or to add a new type of exercise. The courseware databank could also be easily expanded to include a new chapter/section.

4.2 The e-course design

The e-course design comprised six main parts: (1) a syllabus, (2) information search, (3) video materials, (4) skills development, (5) writing activities/exercises, and (6) language conventions

and linguistic features of research genres. Each component was further divided into several units, depending on the nature of the learning focus. The learning points in each unit were highlighted.

4.2.1 Syllabus

The syllabus, which aimed to present a teaching plan and an overview of proposed progress in accordance with the stages of conducting research, was put on the e-course platform for students to download.

4.2.2 Information search

As mentioned, on a scheduled timetable for the use of computer labs, the students met for a two-hour block in the multimedia lab which was wired with an Internet connection. During the computer session, the students were given an orientation to accessing online sources. Hyperlinks in the e-course allowed the researcher to incorporate numerous websites, which provided ample information resources and served as the information hub for the course. Useful websites in relation to research writing provided in the e-course were for instance:

http://www.theses.com/;
http://www.wisc.edu/writing/Handbook/DocAPA.html

The e-course could also link to the library network for the utilization of electronic databases like UMI ProQuest, ERIC, EBSCOhost and others. Although nowadays Google, the most powerful search engine, can find many thousands of hits for a certain research topic, the problem for learners is to know where to start. As a consequence, this user-friendly courseware system made the students' search more focused on relevant websites.

This information search required learning to use search engines, web browsers and meta-sites to locate and retrieve information from the Internet. The Internet hypertext offered easy access to multiple cross-references on related topics across several documents/screens. Useful websites could be continually added to the research writing courseware by entering the relevant URL.

4.2.3 The video materials

As a class lecture supplement, the video *The Research Paper Made Easy* by the Center for Humanities, Inc. (MCMLXXVIII) was put on the e-course platform so that students could view it after class at a time which was convenient to them.

Apart from this, the e-course provided an online venue through which students could share their work with the audience outside of the campus. With students' permission, their video-taped oral presentations together with their written work were put on the e-learning platform so that all students could not only learn from one another, but could also engage in an interactive dialogue that continued even after the course had ended (see Fig. 2 & Fig. 3).

Fig. 2: Oral presentation

Fig. 3: Student's research paper

4.2.4 Skill development

Since research writing involves not only language use but also research design and data collection. Several research methods such as think-aloud, case studies, questionnaires, interviews and observations, and the statistics software SPSS 11.0 were introduced. These research skills are micro-skills for academic writing tasks from the perspective of language-oriented learning. Focus was hence placed on rules of thumb, principles and general guides. Simple numerical presentation (like the means and standard deviation in descriptive statistics), basic knowledge of inferential statistics (e.g. Pearson r correlation coefficient, t test, chi-square and ANOVA etc.) and graphics (such as bar, line and pie charts) were particularly useful and interesting to the novice researchers who leaned toward empirical study. The introduction of SPSS statistics was based on the teacher-researcher's assumption that students might need to do a numerical analysis from their data. Moreover, the language use in quantitative analysis seems to be easier than that for qualitative research. The researcher presumed that students might choose a quantitative study for a start.

4.2.5 Writing activities

Overall, authentic samples from journal articles for each section of a research paper were analyzed in the format of exercises. Fill-in-the-blanks, true/false, multiple choice and matching questions on the web pages were similar to classroom practices. Various exercise types, content prompts and questions guided students to analyze information elements and to be aware of common patterns and expressions. Without being constrained by the class schedule, students could read or even do these exercises on the web at their own pace during their free time (see Fig. 4). For instance, each student was asked to come up with an introduction consisting of a thesis statement and the general content and scope of his or her paper. Well before the deadline for the submission of the introduction, several sample thesis statements and introductions addressing different research questions were shown on the e-course. A checklist of questions served as a broad guideline that students were made aware of to keep their writing focused.

Two other assignments were writing a thesis statement and drawing up an outline. Students were asked to draw up an outline, which had a 250-word limit. The students were given inputs on outlining and planning and were asked to identify main and supporting arguments for the different paragraphs from sample texts.

The announcement board was designed for teachers to inform and remind students of their homework. The students were expected to submit their assignments for the teacher's correction at proposed progress points specified in the syllabus. The dates and times of homework submissions as well as students' grades were recorded by time-mining technology on the e-course platform.

When students' good written work was put on the e-course platform, it became a sample text for analysis that could be used to teach future students. Thus students helped to build their own resources on the e-course.

Fig. 4: Exercises

4.2.6 Language conventions of research genres:

After locating information, students had to evaluate it in terms of its relevance to the topic under study, learn how to organize a research paper and cite the research sources they had used. The courseware incorporated a unit which contains worksheets and instructions for the citation of research sources both within the body of the paper and in a bibliography and which was linked to many university web pages related to academic writing. For example, the Essex University and the Purdue Online Writing Lab provide a hyperlinked web page *Essay Writing*, located at:
http://www2.essex.ac.uk/academic/schools/undergrad/essay.htm;
http://courses.essex.ac.uk/hr/hr111/essay_writing%20guide.htm;
http://owl.english.purdue.edu/oldindex.html;
http://owl.english.purdue.edu/handouts/index2.html

As the students entered the web page, they were taken step by step through the process of writing a research paper. The page links on these websites contained a variety of exercises that offered practice in outlining, paraphrasing, summarizing and quoting resources in several formats

(see Fig. 5 & Fig. 6). In this way, the students became familiar with the discourse patterns and rhetorical conventions of academic papers.
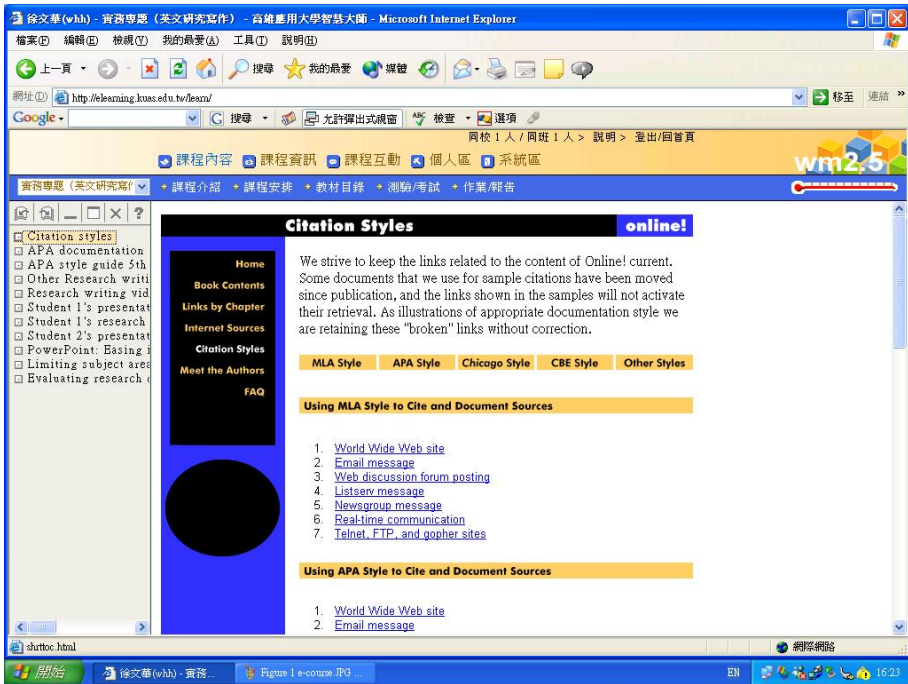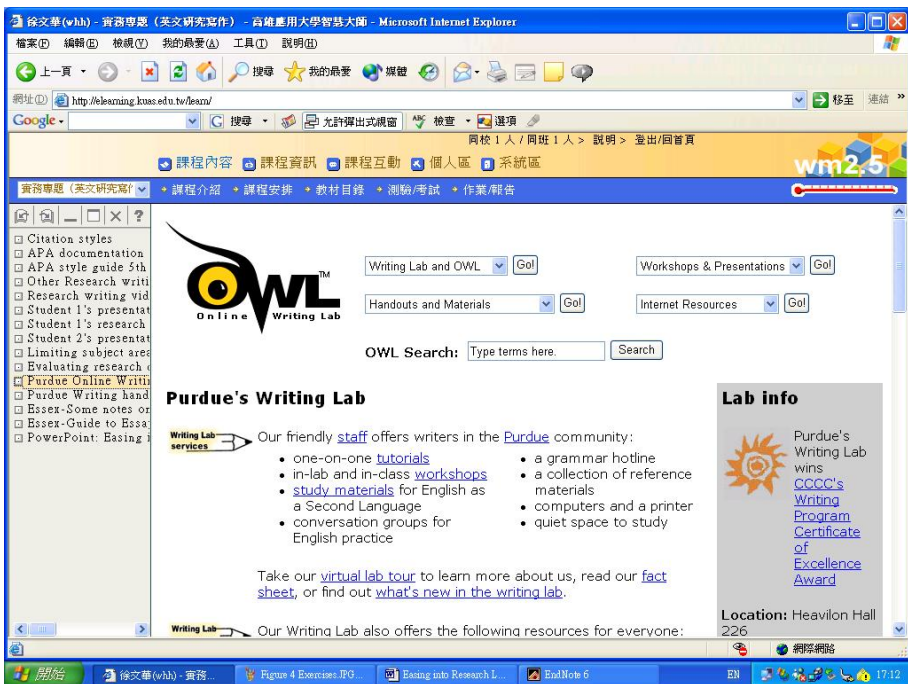

Fig. 5: Citation styles

Fig. 6: Purdue Online Writing Lab

5 Research methodology

The main purpose of this research was to have a better understanding of how a research writing teacher can help students to undertake writing and research tasks in an easy and systematic manner. As such, the research questions were:

a. Does a genre and courseware approach help students to improve their research writing?

b. What problematic areas do EFL novice researchers encounter while conducting research and writing a paper, and how are they solved?

To obtain students' reaction about the course, their perceptions toward an integrated teaching approach (i.e. genre and courseware) and their insights into their participation, two methods were adopted to collect the qualitative data: a questionnaire for immediate recall and interviews. An anonymous questionnaire with open-ended questions (see Appendix 2) was distributed at the end of the academic year. The follow-up interview included five questions. The questions for the questionnaire and the interview were designed by the researcher. The responses were classified into several categories based on the gist of their statements together with a given number referring to the accurate count. Meanwhile a quantitative analysis of the data focused on the effectiveness and helpfulness of the courseware used.

The researcher speculated that there might be an e-course effect on better writing performance, as the courseware was used as a tool to promote students' awareness of research genre, knowledge construction and development of critical thinking. In other words, the total number of log-ins on the e-course was assumed to be associated with the research writing performance. To test this speculation, it was checked whether these two variables, the total login behavior and the final writing score, showed a high level of agreement by way of the Pearson r correlation test. The login behavior was defined as the total number of log-ins. It is worth mentioning here that the teacher-researcher did not tell the students that their online records would be a part of their grades for the course. The final average writing score was calculated according to the formula below.

The average assignment score = a summation of the score of each writing assignment/the total number of the assignments.

The final score = (the average assignment score + the score of the final draft for a research paper)/2

Note: The writing assignments were the statement of topic, research questions formulation, thesis statement, outlining, preparing a working bibliography, citation styles, writing the introduction, the body and the conclusion, and the abstract.

To further see if there was a difference between high and low use of the e-course website, the pass rates of the writing assignments were analyzed by means of Yates 2*2 Chi-square test (continuity correction). The passing score was set at 60 as per the school's conventional criteria. The Chi-square test was administered on a 2-point scale, 0 and 1. It was coded 1 for those who had got 60 or above and 0 for below 60. The whole class was equally split into two groups, i.e. high and low e-course users, based on the students' online records before each assignment due. The high e-course users, meaning the first twelve highest logins, were coded as 1. Conversely the low e-course users, counted from the bottom until the twelfth lowest logins, were coded as 0. The prediction is addressed as in the hypothesis: there would be higher pass rates for an assignment in the group of high e-course use than the group of low e-course use.

Finally, the analyses were meant to check whether there was convergence of results from the quantitative and qualitative data on some points.

6 Data results and discussion

The research topics of the 24 students are listed below in Table 1. Each paper, bound and submitted, was around 20-25 pages in double space.

Advertisements concerning sexual appearances
Children's drawing and their inner world
Applying Sun Tzu's Arts of War to business administration
Gays and lesbians: Creating and raising their own family
Credit card behavior: A study of Wenzao college students
The effects of media violence on children's behaviors
Increasing children's interest in learning English
Betel nuts ladies in Taiwan: Wenzao students' viewpoints
The Fellowship of the Ring: Movie and novel
The advantages and disadvantages of being a vegetarian
Corporal punishment: Parents' values and personality traits
Suggestions for communicative approach applied at primary schools in Taiwan
College students' perceptions toward cloning for medical use only
The impact on sexual attitude and behaviors of school-based condom availability
The literacy of foreign brides: An exploration of the foreign brides in the Ann-Chao community
The necessity of brand loyalty in a cosmetics company: An example of SHISEIDO
Internet addiction among college students
Keeping children from inappropriate websites
Literacy in early childhood
The effects of captions on EFL learners
The effect of the Internet on English learning
Multi-level marketing consumers in Kaohsiung
Online education in Taiwan
Fighting Internet crimes

Table 1: Students' research topics

	The total number of e-course logins
The final writing score	r=0.077, sig. (2-tailed)=0.523, N=24

Table 2: Correlation between logins and writing performance

The results (in Table 2, very low r, r=0.077) indicate that there was virtually no consistency between the number of students' e-course logins and their final average writing scores. This implies that the students' research writing performance might not have been influenced by logging onto the e-course. It was possible that other factors like English proficiency, personal interest and topic domain knowledge could explain writing discrepancies. However, the researcher wishes to hold this result in reserve as the Chi-square test shows a different picture.

Research assignment	Pass % of high logins	Pass % of low logins	χ^2	p	Significance
Statement of topic	100 % (12/12)	58.33 % (7/12)	4.042	0.044	*
Research questions formulation	100 % (12/12)	66.67 % (8/12)	2.700	0.100	
Thesis statement	91.67 % (11/12)	41.67 % (5/12)	4.688	0.030	*
Outline	100 % (12/12)	50 % (6/12)	5.556	0.018	*
A working bibliography	91.67 % (11/12)	58.33 % (7/12)	2.000	0.157	
Citation styles	91.67 % (11/12)	50 % (6/12)	3.227	0.072	
Introduction	91.67 % (11/12)	41.67 % (5/12)	4.688	0.030	*
Body	91.67 % (11/12)	33.33 % (4/12)	6.400	0.011	*
Conclusion	83.33 % (10/12)	25 % (3/12)	6.042	0.014	*
Abstract	83.33 % (10/12)	33.33 % (4/12)	4.286	0.038	*

Note: "*"=p<.05; "**"=p<.01

Table 3: Summary of the Chi-square test results between high and low e-course use in the pass rates of ten assignments

Table 3 reveals the general beneficial effect of the courseware on the students' writing performance as the pass rates between high and low logins across ten assignments have shown (100 % >58.33%, 100 % > 66.66 % , 91.67 % > 41.67 % and so on). Except the assignments of research question formulation, bibliography and citation styles, all the p-values(<.05) indicate a significant difference between high and low logins of the e-course in the pass rate of an assignment. For instance, for the assignment of finding a topic, the pass rate of students who often used the e-course website reached 100 percent (12/12) while that of students who used the e-course less often was 58.33 % (7/12). The difference between these two was significant based on the Chi-square test (χ^2=4.042, p=0.044<.05). In terms of the thesis statement, those who often got online for the e-course outperformed the students who did so less often or not at all, with pass rates of 91.67 % and 41.67 % respectively (χ^2=4.688, p=0.03<.05). For the later assignments, which seemed to be more and more difficult, of note here is a decreasing tendency of the pass rates of low e-course users (41.67 %, 33.33 %, 25 %). In other words, looking at it from the other way around, the pass rate and high e-course use might be linked in some way in that the greater difficulty of an assignment probably made the utilization of the e-course website become more indispensable.

Logging onto the e-course was associated with referring to others' work and observing patterns of development of writing modes and principles of organization for structuring a research paper. This implies that the nature of the assignments might have determined the students' conceptual processing condition. Some of the assignments required the higher ability of mapping out a logical and meaningful research macrostructure. Reading the e-course materials and parsing their language and structure use seemed to facilitate students' ability in this regard (and hence the pass rates). This also helped to shed light on why – for the assignments of research questions formulation, bibliography and citation styles – no striking differences between the group of high e-course use and the group of low e-course use in the pass rates were spotted. It was possible that there was no salient genre involved in these assignments, and therefore no apparent difference in whether or not they went online the e-course to observe more sample work and examples.

Table 2 shows that the writing score and students' use of the e-course website bore little relationship with each other. In contrast, frequent e-course visits favored the pass rates of some writing assignments. At first impression, the results between Table 2 and Table 3 seem to contradict each other with regard to the e-course effect on the writing performance. However, it might be argued that a high writing score entails more effort (e.g. subject to personal time investment and different cognitive modes etc.) than a pass versus failure criteria. A writing score could also be explained by language literacy and relative knowledge of subject matter. On the

other hand, the e-course that aimed to keep students' cognitive engagement on track while writing has generally placed students in an advantageous position concerning the pass condition.

Although the expectation of the impact of the e-course use on the writing performance in a certain aspect was supported, the inferential statistics in Table 3 should be viewed with caution. The class size was only 24, which is not large enough to be generalizable to other contexts. As a consequence, to confirm and pursue the helpfulness of the e-course, the questionnaire and interview were analyzed and classified into several categories based on the gist of the students' statements.

6.1 Students' perceptions toward a genre-awareness approach

Positive Response	Count
Prefer move/ sub-move activities	17
Prefer genre awareness in view of a thinking process	20
Useful MLA style and APA style learning	19
Prefer doing class exercises to e-course drills	13
Negative Response	Count
Little time spent on grammar	6
Insufficient explanation why some tone and wording was daring	3

Note: The class size = 24

Table 4: Students' perceptions toward a genre-awareness approach

Among the skills and language features emphasized in the class, seventeen students liked the moves and sub-moves lecture and activities because, as they indicated, the steps involved in research writing were organized and easily followed (see Table 4). When the students were asked which approach they liked most, genre structure or the courseware, the bulk of students' preferences (20 out of 24) tended to center around genre awareness. They admitted that genre knowledge achieved an immediate effect in light of the thinking process. To some extent, there was an analogy with driving, as several students pointed out later in the follow-up interviews.

"Genre function, especially 'move' recognition, is like signposts. It will be easier for a driver to follow directions and judge distances when a road is well signposted."

Furthermore, it was very encouraging for the teacher-researcher to see that quite a few students (13) mentioned that they needed the teacher's push from behind. Their responses often resembled these:

"I remember Ms. Hsu's content lecture. The move structure and citation rules are deeply rooted in my head."
"I would rather do genre-related exercises in class with Ms. Hsu's presence than the expanding drills on the e-course website. They are simply the same drills in high tech format, which simply look fancy."
"I prefer practicing with classmates under the guidance of Ms. Hsu to working on the e-course alone."
"I like Ms. Hsu's lecture. Exploring genre on the e-course websites on my own makes me lose a sense of direction."

Mention was made repeatedly of the APA and MLA styles, which nineteen students (out of 24) felt to be the most helpful component. Without citation learning, they said that their research paper would have sounded like a third-person report and would have been full of plagiarisms.

Negative comments about this section implied "insufficient grammar explanation". They (6) thought that too little time had been spent on grammar. Additionally, three respondents remarked that in some cases it would have been more concrete to be told why some wording and tone was considered inappropriate. Perhaps the teacher-researcher should take the blame because of her failure to acknowledge the students' specific needs for the explanation of syntax and some

grammatical points. This also reveals that the syllabus may be modified in this regard for the next course.

6.2 Students' perceptions toward the e-course application

Response	Count
Easy use of the e-course in searching for information	20
Tension and panic reduction on the e-course	7
Needs in finding clues and content information on the e-course	12
Review lesson on the e-course for 1 to 2 hours at a time before each assignment due	11
Important to put peer work on the e-course	2
Usefulness of the SPSS software instruction	24

Table 5: Students' perceptions toward the e-course application

The easy use of the courseware has received considerable support (see Table 5). Twenty students highlighted the ease of the e-course website with which they could find information from a variety of sources and pointed out that now they judged all information more carefully than they had before. A few students (7) felt that the e-course gave them the opportunity to digest and learn class materials at their own pace and hence reduced class tension and panic. It is worth noticing that those students who kept high online learning records stated their needs in finding the clues and content information on the e-course to analyze, integrate and organize information to complete the task. Journals, articles, conference papers and theses and dissertations were the genres they referred to most frequently. With regard to the work the high e-course users did for the coursework, most of them (11 out of 12) indicated that they usually reviewed homework-related lessons on the e-course site for one to two hours at a time.

One concern alluded to in the students' responses could not be ignored though only two gave such responses. These two students pinpointed their needs for more good peer work as a model in the e-course. They gave the reason that, due to equal proficiency level, the peer discourse and genre were easier for them to emulate. None of the students mentioned that they should have been alert to language processing and keen on language accuracy during the write-up phase. This perhaps reflected again that the teacher should take grammar instruction into account for the next course.

It had been speculated that SPSS instruction and its operation drills in the e-course might be daunting to language students at first exposure. However, all of the students asserted the usefulness of the statistical tool in the stage of research design, despite the fact that not all of them adopted quantitative analysis in their research. As one student put it, "regardless of its complicated mathematical formula, an induction to SPSS has guided us to approach entry-level quantitative data analysis".

6.3 Students' perceptions toward the course

Response	Count
The efforts made on research were disproportionate to the credit hours of the course.	21
Helpful in developing research skills	16
A growing expertise in a content area	14
Sense of achievement in conducting research	9
Direct usefulness in further study	10
Writing skills improved	16
The language requirement of research writing is more demanding than that of other writing courses.	18

Note: The class size = 24.

Table 6: Students' general attitudes toward the course

Most of the students (21) complained that the efforts they had put in for research were disproportionate to the two credit hours awarded by the course. Some even grumbled about their low score after several months' hard work. Three students both naively and bluntly advocated that the department increase the credit hours for the course. They emphasized that on average they spent more than seven hours doing research per week.

In their response, sixteen students indicated the belief that the research writing course, despite being more difficult than other writing courses, had helped them to develop research skills and enhanced their writing ability. Fourteen students asserted that as they conducted research in a topic domain based on a choice of personal interest, a growing expertise in that content area offered them the chance to experience a new role, that of the expert, and becoming a content expert has fostered a greater confidence in their ability to use English to express themselves. Among them, quite a few students (9) even mentioned their pride in being able to see their research come to fruition. Ten students who intended to pursue an MA degree have expressed enthusiasm and excitement about the direct usefulness of research methods and academic genres learned in this course. Two thirds of the students strongly agreed that their writing ability improved after taking the course with particular reference to genre structure knowledge.

Four fifths of the students felt that the language requirement of research writing was more demanding than that of other writing courses. This reaction may be interpreted as the genre awareness effect having been acknowledged by the students. It echoes one of the class lectures about 'moves' for a research paper and their associated communicative purposes (see Section 3). With so many constituent tasks to be accomplished, research writing is definitely not an easy job.

6.4 Answers to research questions

The students' comments have provoked more questions while at the same time providing some answers. Generally, the pedagogical framework appeared to be acceptable to the students.

The questionnaire results gave an affirmative answer to Research Question 1, "Does a genre and courseware approach help students improve their research writing?" Genre knowledge and the web-based e-course have helped students to undertake research writing in an interlinked pattern. The former provides a guide in organizing and developing content. The latter consolidates genre concepts introduced in class. The Chi-square test results showed some evidence of the effectiveness of frequent e-course utilization on the writing performance. The inter-relevance between these two approaches supports Toma's (2000) claim that teachers must find an optimum method to integrate courseware into their programs of instruction.

With the advancement of computer technology, various forms of courseware have now found a place in language curricula. It is clear that 'that place' cannot be left undefined, if the course is to be effectively delivered. The triangular data of this research (i.e. students' writing performance via quantitative analysis, learning attitudes and behavior from questionnaires and interviews) hint that genre instruction in class can be enhanced by pedagogically-based courseware. Similarly, the e-course effectiveness may be contingent on the serious consideration of its incorporation into the classroom-based syllabus. In other words, courseware cannot be operated independently, without teacher supervision. To perform its desired function, courseware needs 'live' instructional support. This is evident from the responses of some students, e.g. "I prefer doing genre-related exercises in class with Ms. Hsu's presence to working alone on the expanding drills on the e-course website". The human element in relation to class interaction may have played an important role in the process of teaching. The issue of whether the teacher role should not be excluded at a particular point of computer-assisted language learning is worth investigating but beyond the current research aim.

With regard to Research Question 2, "what problematic areas do EFL novice researchers encounter while conducting research and writing a paper, and how are they solved?", the students did not give many comments in their responses to questions 2 & 3 in the questionnaire and

questions 13 & 14 in the interview (see Appendix 2). Their answers included: (1) tenses, (2) appropriate expressions of arguments, (3) word choice, (4) argument development; and (5) coherence and cohesion. From the students' perspective, it seems that in the process of writing research papers, language usage has caused more problems than the global organization of information for topic development.

In contrast with the teacher-researcher's marking on the assignments, those whose assignments were rejected and returned for revision made a few errors. They were:

a. wide-ranging topics, failing to consider the importance, manageability and availability of resources.
b. lack of a clear focus in the thesis statement such as taking a stand on an issue, and stating the purpose of their research.
c. poorly-formulated research questions in light of keeping them narrow and inter-related within a subject area.
d. a failure to interpret main ideas/topic sentences as per the research questions.

In this study, a number of students voiced their concern about grammar explanation. After raising students' awareness of genre and getting them familiarized with the general format of research papers, the most fundamental question about the rule-governed aspect of language re-surfaced. This suggests that moving from the conceptualization level to the linguistic control level, there must be phases to deal with grammar and syntax so that teachers can direct learning away from genre knowledge, research methods and skills toward common language components and forms with full focus. Otherwise, students may make the same grammatical errors numerous times in extended writing. Poor syntactic ability may impede arguments from being conveyed properly in a research paper.

7 Conclusion

The approaches applied in the present research writing context require no radically new approach but rather the integration of existing approaches such that they complement each other. The 24 students' overwhelmingly positive comments about the course led the researcher to draw the following two conclusions.

a. Today teachers do not seem to have much choice under the pressure of large class size and limited instruction hours. They may take a user-friendly courseware system into consideration for their course design and may benefit from it. Although it is very time-consuming to design and edit online materials and handouts, the huge buildup and storage of lessons and teaching materials with time will – in the long term – provide a valuable data and reference bank for both students and the teacher.
b. Genre analysis might be hard for beginners to pin down. However, if we pursue a modest goal of getting students to explore at least some structural characteristics of research papers, the approach advocated in this study should be of practical help to students.

Finally the proposed teaching framework in which each delivery approach/element progresses in a systematic order is certainly not a panacea. It may offer a concrete illustration of how to help students systematize what they have observed about language features and conventions of an academic genre and hence undergo research in a principled manner. Students' feedback is essential for the ongoing reflections on, in and for the practice of this course.

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Appendices

Appendix 1

Worksheet 2B: Identifying a generic move-structure for Introduction in a research paper

The following is an excerpt from a research paper, entitled <u>*Marriage for the 21st Century*</u>.

Choose the correct moves to match the scrambled text segments and restructure their proper order.

A. Presenting background information   B. Identifying research scope   C. Stating research purpose
D. Identifying the place of the present work in relation to other research
E. Delineating areas of agreement and disagreement in the field.

    Concerns in the popular press have focused on cohabitation as a threat to the institution of marriage. "What has emerged is a dramatic discordance between the expectations and experiences

of family time" (Daly, 2001, p.283). It is proposed that we must look to the future, rather than idealizing the past, to find workable family values and structures for the next century. Couples in the 21st century, while having difficulty coping with the society's pressures, must develop styles of creative marriage within the boundaries of monogamy instead of disposing of marriage.

Despite rising divorce rates, marriage remains a firm foundation for most couples today. However, greater mobility and flexibility will mark the creative marriages of the 21st century. Although some alternative arrangements may be found in extramarital relations, most arrangements reflect the desire for commitment to one person that runs deep in our culture. This desire has formed the basis for the new types of marriage frequently seen today, the creative arrangement for dual-income couples.

The norm against which new creative marriages are judged is the traditional marriage of the nuclear family with the father as the breadwinner, the mother as homemaker, and two children. However, dual-career families in which both parents work, and sometimes an older child works have replaced that family as well. This research will examine the role of commuter marriage, role-sharing, marriage by steps, and contract marriage.

Exercise source: Lester, J.D., & Lester, J.D., Jr. (2004). *Instructor's manual to accompany writing research papers: A complete guide* (p. 168). London: Longman.

Appendix 2

Open-ended questionnaire:
1. What stage on the syllabus is determinant in guiding you to get on the right track of writing a research paper?
2. What difficulties did you encounter while undertaking research and how were they solved?
3. What are the problematic areas that still need further endeavors?
4. Would you like your teacher to continue teaching this way, a genre-awareness and a courseware delivery?
5. Which approach did you like best while the teacher oriented students to embark on some cognitive activities: genre recognition exercises or the e-course?
6. What perception of research writing did you hold before this course?
7. Do you agree this course has helped you to enhance writing ability? In what way?
8. What do you think about the e-course application to research writing?
9. How do you view your participation in research writing?

Interview:
10. What immediately comes to your mind when you think of research writing?
11. As an undergraduate student, do you think it is helpful to learn a statistical software tool since the research is small scale in sample size?
12. Apart from genre knowledge, research methods and skills, what other knowledge or skills do you think you need for research writing?
13. What part did you find was harder in the process of research writing?
14. What improvement do you think you would make for a further research paper?