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Tríona Hourigan & Liam Murray

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Mapping Successful Language Learning Approaches in the Adaptation of Generic Software

Tríona Hourigan* and Liam Murray
University of Limerick, Ireland

This paper investigates the use of a generic piece of software, the *Copernic Summarizer* (www.copernic.com) as a language learning tool and considers two discrete pedagogical approaches used as part of its integration within the context of teaching and learning a foreign language. Firstly, this paper will present a brief overview on the emerging field of automated summary writing and its importance and relevance for language learners today. A description of our empirical study is then presented which concentrates on the integration of this tool within a third level classroom environment. Basically, this particular classroom context involved the use of two separate control groups; each one was introduced to and employed the *Copernic Summarizer* (CS) at different stages during the CALL integration process. In order to examine the students' application of this tool to their L2 learning, we examine the data from both learner-produced summaries and written commentaries in order to assess whether or not this software has been successfully established as part of the students' long-term integration strategies. As such, we will provide examples of the L2 benefits experienced in the summary writing task in order to consider how learners mapped these particular issues onto their adaptation of the tool.

Introduction

Within the current climate of lifelong learning, language students today are afforded many opportunities to exploit and implement both dedicated and generic CALLware as a means to establish, develop and personalise their language learning strategies. Therefore, it is important that students hone their particular learning skills in order to adjust to the demands synonymous with working within the ''information society''

*Corresponding author. Department of Languages and Cultural Studies, University of Limerick, Plassey, Castletroy Co., Limerick, Ireland. Email: Triona.Hourigan@ul.ie

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(Marshall, 1996, p. 268) and to apply their knowledge and experience to the task of integrating electronic resources into their own learning aims and objectives. Thus, the idea of 'reorientating' ourselves within this relatively new environment is an important aspect of training language students in terms of encouraging and educating individuals to use CALLware appropriately so that they may learn how to ''retrieve, select and use the most suitable information'' (Lambeir, 2005, p. 349) applicable to their academic or professional circumstances. With more exposure and experience this could help students to establish a ''learning identity'' over time as they become more familiar with their individual needs and requirements (Deakin Crick & Wilson, 2005, p. 359) and indeed to allow this identity to evolve as they progress through various lifelong L2 educational experiences. Thus, it is intended that students would eventually have the appropriate evaluation skills to recognize firstly any particular use which a potential L2 tool may offer them and secondly to pinpoint areas of their learning which could be helped as a result.

The current phase of CALL recognizes this global issue of integration as a complex and at times contentious question. For successful integration to occur, it is dependent on the interplay between many diverse and complex factors such as: government educational policy, institutional vision, departmental cohesion, teaching values, student enthusiasm and ability (McCarthy, 1999). Indeed, such a diverse scope of topics has resulted in the emergence of many informative studies which have investigated further these salient themes. Among these we can include typical examples such as: integration at an institutional level (Murray, Hourigan, Jeanneau, & Chappell, 2005; O'Donoghue, Singh, & Dorward, 2001), the perception of VLEs by university students (Song, Singleton, Hill, & Koh, 2004; Gillespie, 2000) and the impact of web-based universities as an emerging educational trend (Muse, 2003). In addition, studies have looked at this issue within a distinct classroom environment such as Bayliss (1995) and Coleman (1996) whose research advocates the implementation of specific pre-CALL and post-CALL tasks in order to establish clear structures for introducing a CALL-based approach into the L2 curriculum. The issue of student training and skills development within the context of corpus consultation skills (Chambers, 2005; Chambers & O'Sullivan, 2004) is another emerging area relevant to successful CALLware integration. Consequently, this need to nurture integration techniques is especially true when working with generic tools which, in contrast to the more structured and organised environment of dedicated CALLware, may represent more of a challenge for learners in terms of assessing any L2 potential and any possible L2 functions of the tool in question.

In the past, the integration of automated summarisers into an L2 environment has been neglected within the field of CALL integration studies, despite the fact that this would offer a valuable opportunity for researchers to assess student attempts to appropriate this type of generic tool to their specified L2 needs. Thus, the aim of this paper is to report on a study which investigated the integration of one such generic tool, the *Copernic Summarizer*, into a CALL classroom context. This was essentially a task-based study which was carried out with students from varying language backgrounds and levels who were enrolled on a language and technology module.

Two separate groups were introduced to the tool at different stages in order to ascertain the optimum pedagogical approach regarding training students to integrate generic tools into their L2 studies. We will now provide a brief overview on research in the field of summary writing which will concentrate on both automated and traditional techniques followed by an in-depth discussion of the issues which arose in this study. Our discussion will consider the different experiences of our control groups in terms of their L2 acquisition; and their evaluation of the tool with the specific aim of examining the integration process established by the learners.

Summary Writing: Automated and traditional techniques

Automated Summarisers

With the emergence of more efficient and accurate multilingual summarisers on the market, it is now pertinent to address the issue as to whether or not this software could indeed provide the student with a useful, advantageous and effective tool in their language studies. There are several multilingual automated summarisers currently available today such as the *Copernic Summarizer* (www.copernic.com) and *Pertinence* (www.pertinence.net) which condense information from a wide range of data sources such as: emails, PDF documents, web pages and Word documents. These generic tools were developed primarily to help consumers to manage and access information more efficiently (Hahn & Mani, 2000, p. 29) and as such, research studies are concerned with refining current techniques and practices in order to improve the software's performance and effectiveness. According to Mani and Maybury (1999) typical approaches undertaken within this field are mainly categorized under the following headings: corpus-based (Grover, Hachey, & Hughson, 2004), discourse structure (Marcu, 1999), knowledge-rich approaches (Hahn & Reimer, 1999), evaluation methods (Mani, Klein, House, Hirschman, Firmin, & Sundheim, 2002) and multi-document summarisation (Barzilay & McKeown, 2005).

Traditional Summary Writing

While neglected in certain quarters of third level language education, particularly in the UK and indeed in Ireland, the art of summary writing has long been established as a vital and important communicative skill in both academic and real-life contexts (Murray & Barnes, 2000, p. 77). The benefits associated with this task are wide ranging with the most significant feature being that regular practice of this generic and flexible supra-cognitive skill can help learners to improve their capacity to abstract and synthesise information (Porter, 1990). Research is broadly focused on measuring the experiences of both native and non-native summary writers. D'Angelo Bromley and McKeveny (1986) and also Hill (1991) discuss the relationship between summary writing and vocabulary development specifically for native-language speakers and subsequently emphasise the usefulness of this technique for the

integration of both reading and writing skills. Additionally, practitioners can apply this exercise to a foreign language learning context as it further challenges the learner to develop and indeed hone these important communicative skills in their L2:

> These summarization exercises, in addition to helping to achieve a greater level of second language proficiency through the acquisition of better lexical, rhetorical, and syntactical skills, will also provide students with a most useful survival skill in an age where such massive volumes of information are at one's fingertips. (Corbeil, 1997, p. 162)

Therefore, not only are students able to improve their skills in the mechanical aspects of the language such as vocabulary and syntax, but this useful exercise is also highly adaptable to other real-world contexts. The complexity of this reading-writing activity is an important feature to consider as students must learn not only to cope with the mechanical features of the language such as grammar and syntax but also to apply the standard summarization rules in order to produce a coherent text in their second language. For further reading on these summary writing rules please consult: van Dijk and Kintsch (1978), Brown and Day (1983) and Brown, Day and Jones (1983). Understandably, both native and non-native learners experience many difficulties with this task, a theme which has been documented in many years of research. Most notably the twin challenges of comprehension and reformulation emerge as significant influential factors which can affect student performance (Kirkland & Saunders, 1991, p. 110). Thus, when applied to the context of our present study, the established complexity of this task coupled with the exploitation of an unfamiliar generic summarising tool highlighted the need to investigate an appropriate pedagogical approach for application into the students' self-study integration skills. Let us now move on to outline the methodology of our empirical study before discussing a number of relevant examples relating to L2 acquisition and software integration which have emerged from our data.

Methodology used for Integration

Choosing the Summariser

Prior to the installation of the *Copernic Summarizer* in our multimedia lab, an evaluation of automated summarisers was undertaken in order to identify the most appropriate summariser for use in a pedagogical context. We evaluated three summarisers: the *Copernic Summarizer, the Pertinence Summariser* and the autosummarise function in Microsoft Word in order to pinpoint the most suitable tool which we could apply to the classroom environment. In addition, we also measured the quality of the output provided in order to underline the most suitable text types for classroom tasks. During this preparative phase of the empirical study our assessment concluded that the *Copernic Summarizer* was the most impressive overall in terms of usability and the quality of summary output (Hourigan, 2005).

Data Elicitation Phase: Background and student profile

The empirical data elicitation phase took place over a nine-week period during Semester 1 of 2004–2005. This process involved the cooperation of approximately 28 students registered on a language technology module who would be evaluating the performance of the *Copernic Summarizer* as part of the course assessment requirement. The module incorporates students of varying L2 levels from a number of different MFL courses such as language and cultural studies, applied languages, applied languages and computing and Erasmus students. It is important to stress that this module focuses on using technology to raise the students' awareness of their L2 learning strategies. The main aims of this programme are to introduce learners to "the major pedagogical, professional and research applications of technology in modern languages and to enable students to integrate these into their studies" (course outline, 2005). Thus, the assessment must allow the learner to establish a personalised approach towards their L2 acquisition in order to encourage individuals to become more aware of their *own* language learning needs. Students in the course were both novice CALL users and inexperienced L2 summary writers. Prior to the commencement of the module, a number of target language texts in French, German, Irish, Spanish and English were posted on the course web site in order to accommodate all students who were studying various language combinations from beginner to advanced levels (www.ul.ie/~appliedlanguages/sumtext.htm).

Data Elicitation Phase: Approach

Group 1 received formal instruction on summary writing and was assigned homework in the language of their choice to be submitted via email using the summary writing guidelines which were outlined in class. This group, which we termed the 'traditional method' group, was firstly instructed on developing traditional summary writing techniques. The students were then introduced to the software during the second week of the course and were invited to use and assess the tool in their homework assignment for the following class. Group two was termed the 'full integration' group and received instruction during their first class, using the *Copernic Summarizer* as a tool to give examples of summary writing. Classroom homework was based on integrating the tool into their summary writing strategies. As an end of semester assignment, all students had to submit a 2,500 word evaluation of the *Copernic Summarizer* in terms of its performance and potential as a language learning tool. Please consult Tables 1 and 2 for a brief summary of these discrete approaches.

Objectives

In this particular learning context students had to learn to execute two essential tasks: (1) to write an L2 summary; and (2) to integrate a generic summariser into this exercise. Essentially, we wanted to assess whether this specific skill development would progress differently in both groups due to the subtle stages in which the CS was

Table 1. Traditional group approach

	Task	Submit
Week 1		
Introduction to summary writing (traditional methods)	Pick a text, write a summary and a commentary (300 words)	Email to tutor before class.
Week 2		
Discussion of homework Intro to the CS	Pick a text, writing a summary using CS and a commentary (300 words)	Email to tutor before class.
Week 3		
Discussion of homework and end of term essay	Questions Carousel activities	Submit essay week 10

Table 2. Integrated group approach

	Task	Submit
Week 1		
Introduction to summary writing (CS used to highlight examples)	Pick a text, write a summary using CS and a commentary (300 words)	Email to tutor before class.
Week 2		
Discussion of homework More practice using the software	Pick a text, writing a summary using CS and a commentary (300 words)	Email to tutor before class.
Week 3		
Discussion of homework and end of term essay	Questions Carousel activities	Submit essay week 10

introduced to the learners. Thus, the amount of reflective time which students were given in terms of classroom discussion, homework and end of term assignments were all considered as important opportunities for learners to assess their experience of integrating the tool into the task. Our data would be examined under two major criteria: the L2 levels which arose in their summaries and their experience of integration as documented in their commentaries (Hourigan, 2004).

Emerging Integration Issues and Benefits for L2 Acquisition

Traditional Methods Group: Before and after

For students in this group, the stand alone summary writing task emerged as a valuable opportunity to pinpoint and indeed reflect upon their L2 experiences before

moving on to consider the question of integrating the summariser. Due to the fact that summary writing was a neglected part of their formal language studies this initial 'familiarisation task' emerged as a helpful introduction to the exercise. As this was not an official SLA module, but rather a technology integration module, the personalisation approach was established as an integral component in order to help students to diagnose certain problematic issues which they may have experienced when undertaking the task. In the majority of cases, there was typically a close match between the standard of the learner's L2 summary and the issues highlighted in the commentary, thus underlining the fact that students were indeed becoming more aware of their shortcomings as language learners. Of course, these shortcomings were dependent on the standard of the individual learners. Intermediates and post-beginners understandably reported more difficulty with comprehension and written language issues than their advanced counterparts. While it is not possible in this paper to explore a large sample of learner types in this class, we will look specifically at one example which is a typical representation of the main themes emerging from the general experiences of the student sample. The following, in Table 3, is a summary of an advanced EFL student's work *before* integrating the CS.

In terms of structure and preparation, the student establishes a keyword selection strategy (as outlined in the classroom handout) before moving on to write the summary. The following is a brief extract of this student's summary of a technical text:

> BT wants to provide its customers with more comfortable TV and cinema entertainment. *The Financial Times* reported the company is dealing with the main TV broadcasters as well as with the manufacturers of Freeview. Set-top boxes to deliver TV programmes and movies via broadband. Further, the planned enhanced version of the Set-top boxes would bring the 'time shift' viewing.

Table 3. Traditional summary writing task

Advanced student: EFL traditional summary	
Summary	Personalised commentary
L2 issues: Comprehension: main points in L2 understood and included Condensation of points: Appropriate length written in one's own words Grammar: syntax, verb/subject agreement; accurate tenses Discourse: difficulties with specialised technical discourse Leads to problems finding synonyms in L2 Cohesion: needs to use more connectors	*Student assessment* Learner discusses his problems with these very issues which he can return to at a later stage. Also aware of issues with verbs, preposition, punctuation. Establishes importance of: • preparation (keywords) • cohesion • relevancy

While the student's overall linguistic standard is good, a number of representative factors can be identified in this example. Certain inappropriate verb and adjective choices such as ''BT *wants* to'' and ''*comfortable* TV'' pinpoint the learner's difficulty in creating a suitable and relevant style which accurately represents the tone of the source material. In addition, problems are clearly identifiable with the subject verb omission located in the third sentence: ''Set top boxes to deliver'' which clearly highlights a distinct incoherent sentence structure. Furthermore, no attempts were made to find synonyms for specialist terms such as 'time-shift viewing' and 'set-top boxes', thus suggesting that this student's schemata structures did not have sufficient background data to deal with these new terms, an understandable difficulty experienced by a student working with a specialised text type. It is at this point that we crosscheck the student's commentary in order to assess whether the learner is aware of these issues:

> I have to learn how to make my texts more coherent, I have to learn the transition phrases and some more devices how to connect my ideas together to create one compact text. I had to be careful when picking up words that would fit to the style and I still don't know whether I managed to do it well.

In this extract from his commentary we can identify the level of reflection established in his diagnosis of problems experienced in the exercise. Clearly, there is a certain level of awareness expressed here as the student has highlighted accurately his problems with his current writing style such as: writing concisely, achieving cohesion and discourse familiarity. Indeed, the cautious approach which the learner recounts is indicative of his unfamiliarity with the task and as such, emphasizes his lack of confidence in terms of establishing the required style demanded by the task objectives. Coming back to our discrete pedagogical approach, we were interested in further examining this point within the integration context of the task in order to ascertain whether or not his 'L2 needs' awareness would re-emerge as an influential factor (Table 4).

In terms of the learner's overall summary standard, the student is making progress as a summary writer and is maintaining his ability to condense accurately the main ideas of the text while staying within the length restrictions of the summary rules. The keyword concept list offered by the CS is assigned an L2 role by the learner who recognizes the significance of this strategy due to his previous experience of the task. While admittedly the issues of style and cohesion with summary generation are still an issue for the student, it is important to note that the he keeps these in mind when assessing the *Copernic Summarizer's* relevance to his particular L2 writing needs:

> One of the most important rules, while writing a summary, is to rewrite it using your own words. As the CS uses the same structures of a summarized article, it is from this point of view useless for writing a summary. Therefore, you shouldn't use the summary created by the CS. On the other hand, the text can be very useful while reading a great number of texts. I think the CS is a very helpful reading tool rather than a tool for summarizing articles.

At this initial introduction to the tool, it is still too soon to say whether the student will dismiss totally the potential usefulness of the extracted summary as he does

Table 4. Integration task

Advanced student: EFL using Copernic	
Summary	Personalised commentary
L2 issues: Comprehension: main themes understood in L2 and included Condensation of points: concise approach. Cohesive sentence structure in L2 Discourse: specialised discourse (business). Student uses inappropriate use of contractions Grammar: plural agreements; verb tenses; verb/subject agreement	*Student assessment* Has had the chance to pinpoint areas of improvement. Integration is more focused on using the tool and assigning various functions which may be *potentially useful*, e.g., keywords used as control list; comprehension; and *not useful*, e.g., for paraphrasing Transformation of function: summariser = a helpful reading tool

concede that the output is indeed useful for efficient reading practices in the target language. What we can identify at this early stage is the emergence of a particular strategy which we have termed 'L2 function assignment' where the learner, based on his current level and experience of the task, exploits the tool for a specific purpose. Due to the fact that the CS does not provide an original summary, it is of course understandable that the summarised output will not adequately address the student's wish to improve his level of appropriate sentence reformulation and written discourse. More importantly, the student's evaluation of the summariser in accordance with his established experience with the task results in a redefinition of the tool where the learner allocates an alternative function to the CS, i.e., ''a helpful reading tool''. To briefly sum up, this typical example of group trends in this class reveals how students working with this non-dedicated tool typically allocated specific L2 summary functions to the generic features of the software and displayed an emerging sense of discretion with regard its exploitation. While this advanced student was concerned with his writing technique, learners of intermediate and post-beginner levels assigned L2 functions to other generic functions such as the percentage control button and the keyword in context list as part of their *personalised* strategies relevant to their particular learner needs. In a sense, this prior exposure and reflective time on the task revealed a deep evaluation in terms of personalising the tool and learning how to appropriate the generic functions to a specific L2 context.

Integrated Group: Before and after

Similar to the approach taken in the previous section, we will now consider one example which is representative of the typical trends emerging from the integrated methods group (please refer to Tables 5 and 6). This student, who is studying Irish at

Table 5. Integration Task 1

Student with two languages: intermediate (Irish)	
Summary	Personalised commentary
L2 issues: Comprehension: understands and includes main points in L2 Reformulation: writes using her own words Content: deletion of irrelevant data Grammar: syntax; correct use of verbs and tenses in L2 Gender: inaccurate agreement with nouns Minor spelling errors; Punctuation errors; capitalisation omissions	*Student assessment* More SW focused than integration focused. Concentrates on difficulties experienced • lack of practice, • unsure of possible functions of the CS; summarised using traditional techniques

Table 6. Integration Task 2

Student with two languages: advanced (French)	
Summary	Personalised commentary
L2 issues: Content: appropriate summary length Comprehension: main ideas are identified and extracted from the source L2 text (however summary is not original) Structure: Cut and pasted main points from the source text. No attempt made to reformulate in her own words. No evidence of the learner's ability to paraphrase this specialised discourse style (Business) in her L2	*Student assessment* Feels SW skills have improved in terms of condensing sentences and efficiency, still not concerned with importance of reformulation Needed to work again to develop more evaluation skills. Repeated use and practice led to more confidence and evaluative comments; needs more exposure No assigned function yet

upper intermediate level and French at advanced level, chose to use these languages in her evaluations. She worked with an Irish text in her first assignment and moved on to a French text in the second task. We will firstly consider the level of reflection and evaluation present in this student's first integration assignment with the CS tool, keeping in mind, of course, that this class had not previously completed a task based solely on traditional summary writing techniques.

The main trend that emerged from this first integration assignment was that students typically focused on exploring their current standard of summary writing instead of relating this issue more specifically to the evaluation and integration of the summariser. In fact, students tended to exploit this reflective space in a similar way to the approach taken by the traditional methods group in their first class assignment

on traditional summary writing. While we can map certain characteristics of the student's L2 summary writing style onto their diagnosis of performance issues, there is still an apparent gap in terms of the level and depth of personalised integration which emerged from the traditional group's experience. Let us look at the following brief example to clarify this trend:

> Original title: Níos mó Gaeilge ná 'Ríomh'[1]
> Student's title: Foclóir ar do gutháin![2]

This student worked in Irish for the first task and produced a good summary in terms of locating synonyms and reformulating sentences. The provision of an original title in her own words reflected the student's ability to display a level of sound comprehension skills as well as her capacity to paraphrase. This characteristic is also underlined in her written commentary where the learner states that she found the ''prior title too vague and thought my own to relate better to both the real and summarised article''. This is indeed a valid observation as the pun in the original title may have proved confusing for some readers. Similar to the format of the traditional summary assignment the student also documented her difficulties with rephrasing sentences and concluded that her present skills were ''not that good probably due to lack of practice''. What is more important here is that the limitations of the commentary task (300 words) have forced the student to prioritise the analysis of her summary skills over her evaluation of the summariser. In fact, this rather rushed appraisal leads to an inevitable superficial review of the tool:

> I found the software easy to use and particularly liked the way that you were able to change percentage of what you wanted summarised. This feature really helped me out in understanding the text as it broke it down into sizeable pieces so I could gradually understand different sized summaries.

Furthermore, this apparent display of the 'wow factor' (Murray & Barnes, 1998) is symptomatic of a possible 'task overload' for the student who may have found the marriage of both summary writing skills and integration skills to be problematic at this early stage of her assessment. For example, the student does not reflect upon the fact that Irish is not one of the four languages recognised by Copernic nor does she consider the impact of the extracted CS output in relation to her reported difficulties with paraphrasing. Unlike students in the first group who at this stage were typically allocating an L2 function to the generic tool and displaying an emerging level of L2 discretion in terms of exploiting it for other purposes, this apparent absence of integration techniques is representative of a gap in the acquired experiences of the integrated group at this stage. Thus, after taking these influential factors into account we were interested in seeing whether an improvement could be identified in the second assignment on integrating the summariser (see Table 6).

In this example, the student transferred her generic summary writing skills to working with French and understandably displayed a different range of linguistic

issues within this language system. The main problem in this summary was that the student basically copied and pasted the key sentences from the source text, without attempting to reformulate—a skill which had previously posed little problem when working in Irish. Interestingly, while one may assume that this issue may have emerged as a primary concern in her commentary, it appears not to be the case. In fact, it seems that the student is now making up for her earlier lack of focus regarding the CS and chooses instead to discuss her initial discomfort when using the tool:

> I found the software a lot easier to use this time. I assume this was due to the fact that I had used it before. On one hand it means that first time users don't feel comfortable with the software and therefore are less likely to use it again as personally I would not have used the software a second time round if it had not been compulsory for me.

Again, there is little evidence of assigning an L2 role to any of the generic functions of the tool or indeed, analysing its effectiveness with regard to her particular needs. While the valuable comments do underline the negative affective factors experienced in this complex task, the reluctance to make confident and critical observations suggests that more time is needed in order to develop this particular integration critique. Indeed, students generally felt confused about what approach to take and which skill to prioritise in their integration. Essentially, the main problem lies with the limitations of the task. This results in students playing 'catch up' in a sense, with the traditional methods class because the structure of the task did not clearly define reflective spaces for these two complex skills. As a result, we can identify students trying to cover all relevant topics but at a superficial level in the course of the two assignments without any attempt to think critically about their integration needs. Thus, after the conclusion of formal classes, the six-week period for essay preparation emerged as a valuable opportunity for these students to practice further and refine their integration needs analysis in order to develop a more critical examination of the tool.

Benefits in L2 Acquisition and the Process of Integration

Whilst acquiring this more critical examination, we have discovered that the L2 competence level is not a significant factor in this exercise. More importantly, it is the process of the integration task itself that needs to be highlighted and examined in order to ensure successful integration of the tool. Basically, the clear task objectives applied to the traditional methods group helped learners to establish a process comprising four distinct stages: (1) L2 skill acquisition; (2) evaluation of the tool; (3) assigning an L2 function to the generic features of the tool; and (4) the development of learner discretion. As discussed in our earlier examples, it is not enough for the user to provide a general evaluation of the tool's advantages and disadvantages. In order for integration to occur it is crucial that the learner is familiar with their current ability in the assigned L2 task first *before* attempting to evaluate the software. This is simply because generic software does not have any pre-defined L2 features which make the evaluation process more challenging for the user. As such, this type of

discretionary development is vital for students of all levels in order help them to assess the bonus which this tool or indeed any generic tool may provide.

Our research suggests that the CS is potentially more useful to post-beginners and intermediates simply because its generic functions can be mapped onto the typical difficulties experienced at this level such as: comprehension, keyword detection and vocabulary acquisition. Within this particular context, we can apply the term 'positive integration' where the use of the tool is recognised as helpful and beneficial to the student's language learning. In contrast, many advanced students typically have difficulty in mapping typical concerns of their level such as paraphrasing and discourse development onto the tool, thus highlighting certain limitations which fail to address their personal requirements. While a number of functions are acknowledged as helpful, in some cases their higher L2 level negates the use of the tool for comprehension tasks and keyword identification. This emerging characteristic denotes the development of recognising when *not* to use the tool and as such is an example of 'negative integration'. Thus, instead of students blindly using the tool for random L2 tasks, this more structured pedagogical approach makes them ask: ''Can this tool actually help me?'' and ''To what aspect of my language learning could I potentially apply this tool?'' Of course, this does not mean that all levels corresponding with 'positive' and 'negative' integration will remain static and unchanging. Indeed, this is primarily a bi-directional process dependent on the authentic text types which students choose to work with as they learn to reorientate their learning within the information environment.

Primarily, this discretionary skill acts as an 'evaluation filter' (see Figure 1) and is dependent on the student having adequate exposure and practice in the multimedia CALL lab. Thus, it was important to allow students six weeks after their final class to work independently on their integration essay in order to develop and refine this skill. What is significant about this approach is that at the end of this period, students from

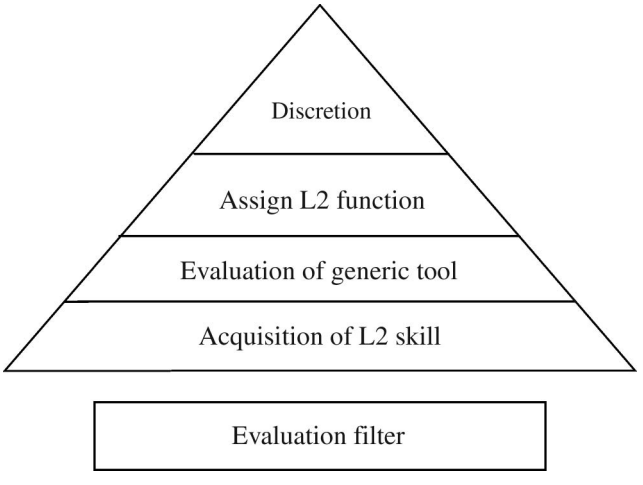

Figure 1. Integration process

the integrated group typically displayed the same level of discretionary skills as their counterparts in the traditional methods group. This was undoubtedly due to having more time to execute the task or to put it more simply they were exposed to the three Ps: presentation, practice and production (Gabrielatos, 1994). For example:

> The *Copernic Summarizer* has proved *beneficial* when used with some types of *genre,* and unsuccessful with others. The genre is not the only factor that affects the software, but also the *complexity* of the text, *linguistic standard* of the user, and the *length* of the text etc. If used *appropriately,* it can be accurate in the main points it produces, time efficient, and assists *comprehension* in preparation for summary writing.

In the above example from a student essay, we can clearly identify the development of the evaluation filter which we discussed earlier in this section. The quality of evaluation is more focused on the integration exercise and reflects the student's acknowledgment of the variables synonymous with the task such as text complexity and L2 level. More importantly the idea of 'appropriate use' underlines the learner's appreciation of personalising the task in order define a potential L2 context such as comprehension. We can also identify this level of awareness among learners in the traditional methods group:

> You have to be very *careful* in respect to this because the summaries of the Copernic Summarizer often do not contain all important information, the keywords are often useless, and the tool *does not work* properly with all types of texts; it is important to find the *suitable text* for this tool. But if you have to summarize a type of text that works well with the tool, it *can help* you to identify the *gist* of the text.

Again, we can identify similar themes in this example such as: text genre selection, benefits for language learning and establishing an appropriate context of use. This more critical evaluation approach which has emerged after a nine week period of reflection enables the student to make informed judgements on the potential use of the tool according to each learner's individual experience when working on the task. The overall comments from students in this data sample would strongly suggest that L2 acquisition—such as learning new vocabulary, genre analysis and discourse development—is determined by the development of this discretionary evaluation filter which assigns helpful L2 functions.

Conclusion

The emergence of multilingual summarisers has undoubtedly presented practitioners in CALL with a valuable opportunity to assess their potential as language learning tools. Consequently, the challenge posed by the integration of such generic software into a distinct pedagogical environment emphasises the need to assess the optimum pedagogical approach for successful exploitation by students. As this study would suggest, the type of task allocated to students working in this environment is of primary importance to the overall process. As a result, it is recommended that students be exposed to the specific learning task prior to the introduction and

integration of the software. This would allow the student to define clear and personalised L2 objectives when working with the non-dedicated tool - an approach which is clearly helpful for developing their own personalised evaluation filter. When students are not allotted time to acquire these two distinct skills the quality of their evaluation is affected, resulting in superficial levels of critique due to the learners feeling overwhelmed and burdened from the task objectives. Thus, language learning—in the form of better lexical, rhetorical, syntactical and vocabulary skills (*op. cit.*, Corbeil; D'Angelo Bromley, & McKeveny, 1986)—is more likely to occur when the students recognise the bonus afforded to them by the tool and make the conscious decision to apply its generic functions to specific areas of their language learning.[3]

Notes

1. Translated as: ''More Irish than ever before''—pun on 'riamh' meaning 'before' and 'ríomh' referring to 'computer' in reference to the technological theme of the text.
2. Translated as: ''A dictionary on your phone'': this represents the main theme of the text and maintains the technological focus of the original source text. There is also a grammatical error with the omission of the seibhiú on 'guthán' to express possession in the second person singular.
3. Web references: *Copernic Summarizer*, retrieved March 4, 2006, from www.copernic.com; *Pertinence Summarizer*, retrieved March 4, 2006, from www.pertience.net; language and technology course outline, retrieved March 4, 2006, from http://www.ul.ie/~appliedlanguages/LI4113_Course_Outline.htm; texts for students to summarise, retrieved March 4, 2006, from http://www.ul.ie/~appliedlanguages/sumtexts.htm ~appliedlanguages/sumtexts.htm.

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