Investment and Returns in CALL Development

Brian McCarthy (brianm@uow.edu.au)
University of Wollongong, Australia

Abstract

The ideas expressed in this paper are part of a stocktaking exercise at the end of a fertile decade of CALL software development prior to embarking on a fresh venture in the field. They relate to a practical facet of the development process that can all too easily be obscured by a passion for the production of effective instructional materials, by a fascination with the capabilities and dimensions of a new medium, and by the plain hard slogging involved in the conception, design, content generation, trialling and project management. They also represent a challenge to teachers and academics, the author very much included, to be and to remain aware of productivity as a factor in planning and development of their projects, and their assessment of others.

Perspectives on productivity

It is very easy for the individual whose hands produced a particular item to develop a sense of total ownership and to be oblivious to the fact that the artisan, the article and the tools are all part of a larger world. Outsiders generally have little difficulty in recognising that, no matter how much skill and professional pride a carpenter making a chair in a company workshop may take in the piece of furniture being created, others such as the supervisor, the manager, and the customer, will all view the workman, the craft and the product differently. In a 21st-century Australian university, academics no more function in a vacuum than does a carpenter in a company workshop, but, because of the intimate and absorbing relationship between the person, the knowledge, and the application of that knowledge, we academics, particularly in traditional Arts disciplines, can go for years without seriously considering how what we are doing fits into the broader picture. Ultimately, however, it is a wider community that establishes the relevance, assesses the merits, and determines the viability of the materials we produce.

Academic developers of computer-based teaching materials thus stand to benefit from reflecting on the way what they are doing does or does not fit with the interests and concerns of other parties. This paper will look at similarities and differences in the perspectives of three key groups regularly involved in CALL development: teachers, academic institutions, and commercial publishers. The position of each is group is considered about the motivation for investment, the nature and extent of that investment, and the returns for that investment and the consequent impact of those returns on further development.

Motivation to invest effort and resources

Teachers

Teachers' interest in CALL may stem from a variety of factors working independently or in combination.

- A perception of specific learning needs in their students coupled with a sense that new technologies can stimulate learning by delivering information in fresh ways and by creating rich, flexible instructional processes and learning environments;
- Awareness that computers increasingly represent an idiom with which the present generation of students is very much at ease;
- A sense that teachers can play a unique role in recognising and selecting electronic information and resources that will be of most value to learners and in optimising their benefits by organising them, structuring activities, and integrating them into the syllabus;
- A simple fascination with the technology;
- A desire to improve learning because, in their vocation of teacher, they derive personal satisfaction from seeing students gain increasing mastery of a foreign language, because improved learning makes teaching easier, and because the process may generate job satisfaction in the form of encouraging feedback from students, colleagues or educational managers.

Institutions

To talk of an institution investing in CALL is a shorthand, depersonalised way of representing decisions regarding the allocation of research and development funds taken by committees of academics and senior management in response to priorities increasingly shaped by the policies and directions promulgated by federal bodies. A primary consideration in this process is the institution's desire to enhance its standing by attracting kudos, further funding, and additional students, and to forge links with business, industry, and other educational institutions. Although many such policies work against or ignore the interests of foreign language learning, some, such as internationalisation, technology-enhanced instruction, competitive benchmarking, distance education, degree enhancement, or the need to maintain 'unfashionable' disciplines, can work in favour of foreign languages in general and of CALL in particular. Institutions may also be motivated by a deluded notion that technology-enhanced language learning will somehow deliver large unsupervised laboratories crammed for 18 hours a day with full fee-paying foreign language students who emerge at the end of a 10-week course equipped to perform as interpreters for high-level trade delegations on sensitive missions to a range of European and Asian countries.

Commercial Publishers

With very few exceptions, commercial publishers are motivated primarily by turning a profit. Their product saves teachers time and effort and provides them with a level and scope of expertise and materials beyond their capabilities. They can only take on projects that are sound financial investments. Ultimately, factors such as market size, image, fashion, novelty, and the fit between a project and the particular field in which the

publisher has established expertise and market credentials can exert far more influence on the decisions taken than do matters such as editors' or directors' convictions about the general educational benefits of the material produced, or the desire to see students achieving.

Of the three categories of 'investor', it is only the teacher whose motivation to expend time, effort, knowledge, and resources derives directly from those who will be using the 'product' for their academic development. And it is only the teacher who is in regular one-to-one contact with them.

Nature and extent of investment

Teachers

The most significant input of the teacher-academic into any CALL venture is the conceptual component: awareness of the language system and learning process, identification of a need, recognition of a specific contribution to be made by technology in managing information and cognitive processes, formulation of a solution, and design of materials. Through lack of awareness or lack of interest, the value of the intellectual input often goes unrecognised by non-specialists - the institution's financial and human resources personnel, casual observers from business, industry, or the broader community, and even colleagues in other disciplines. Yet this is the element that is crucial in determining the ultimate effectiveness of the material and that guard against gimmickry, tediousness, impracticality, and irrelevance. It also serves as a quality-monitoring instrument throughout the development process.

More visible and measurable are the investments of resources and time - time spent in design, gathering and organising data, supervision, liaison, trialling, management of resources, preparation of project submissions, and reporting. Teacher-academics, like workshop carpenters, regularly and justifiably make claims of the type "I did this" or "I spent X hours (or days) doing that".

Institutions

In paying for the employment of the individual with the skills to do the job, however, the institution has very clearly also invested. And it matters little whether the capacity to develop CALL materials was one of the original selection criteria. One must ask whether the teacher-developer would be producing the materials if they were not occupying the position funded by their employer. There are, then, layers of investment in most projects, and the nature of the investment at the various levels is fundamentally different. The institution does not produce the goods. Its role is one of sponsorship, support, and facilitation. It pays for someone to put in time and effort, and hence also has a justifiable sense of ownership. It is often also the case that professional pride and academic dedication motivate teachers to put in many more hours than those they are paid for, or that, in matters of career advancement, institutions may not accord the same recognition to the development of teaching materials as they do to more purely academic pursuits.

Questions relating to which party has made what investment frequently surface after the event, when it comes time to resolve issues of intellectual property and copyright.

Regardless of whether institutions receive funding from government or private sources, it would appear that they, rather than the source body, are in a position to claim ownership of intellectual property generated by the resources they administer and that they retain the right of first refusal when it comes to commercial exploitation. Foreign-language teaching materials, it happens, are seldom if ever seen as worthy of commercial exploitation by universities. Many areas of CALL lie out of the ambit of the purely commercial as they involve the conception, structuring and ongoing management of resources provided free of charge to teachers and students within an institution. This includes activities built around such things as email exchanges or chat sessions between foreign language students and native speakers, access to web sites with their unrivalled and ever-expanding capacity to supply print, audio and visual foreign language data, electronic distance-education set-ups, word processing, desktop publishing, concordancers, on-line dictionaries, and automatic translation sites. It is generally the institution that outlays the millions of dollars required to the purchase of the hardware and expertise, and to set the IT infrastructure in place, and it normally does so with little or no specific thought for any use that foreign language programs may make of it. It nevertheless can justify its sense of ownership of any educational 'product', however incidental, generated using the resource. But when it comes to such ingredients as time, energy, expertise, inspiration, motivation, or the soliciting of funds for research or development, the input is provided almost exclusively by the teacher. Material returns for such ventures would normally be generated by a fee for service (tuition, management), and would be unlikely to flow directly to the teacher personally.

Commercial Publishers

The investment made by a commercial publisher is more clear-cut, as it is essentially a straight business arrangement. There are two classic scenarios. In the first, the author, using whatever resources are available, generate material to submit to a publisher. The publisher evaluates it and undertakes to assume the costs and responsibilities of publishing and distributing it on condition that the author agrees to any editorial modifications deemed necessary by the publisher and accept as remuneration a stipulated royalty of perhaps 10 or 15%. The editorial modifications, often driven by considerations of a cosmetic or commercial rather than an academic nature, may well require the author to make further investments of time, effort, intellect, and resources. The second, less common, the scenario is of publishers commissioning work from an individual or team. Under such an arrangement the publisher is strongly placed in setting parameters and in controlling scope, contents, approach, and costs. A royalty arrangement with authors would apply to the completion of the work. In many respects, this model runs counter to the interests of the average teacher-developer. Firstly, the needs base that would normally prompt an individual teacher to develop CALL materials is most likely to be the classroom. In a country like Australia, foreign language classes are traditionally small, non-mainstream, low-priority in terms of government policy and funding, and taught using a kaleidoscope of approaches in a diverse array of institutions and conditions. Moreover, in the area of tertiary education, in particular, the total of students nationally, even if they formed a homogeneous group, may not represent a sufficiently large market for many major publishers to invest in. As a result, authors may have to respond to the power of the publisher holding the purse strings and tailor materials to accommodate the

requirements of much larger markets such as those of the UK, North America or Asia. There is a definite risk that the end product will be less well suited than the original to the group whose needs inspired it in the first place.

In the world of foreign language teaching, publishers still invest primarily in books. By doing so they created material in a medium that is tangible, functional, totally portable, has universal currency, and is independent of electronics, hardware, software, and their frequently incompatible national standards. They thus eliminate many factors that might otherwise fragment the market or allow quick and easy electronic reproduction and breaches of the copyright that are difficult to detect and costly to police - i.e. they protect the capacity of their investment to generate the return on which its publication is premised. For such investors, software tends to be peripheral, closely tied to the print material (and therefore unlikely to be picked up and used, in part or in whole, as a freestanding resource by teachers following another text or methodology), and of secondary importance in the overall project. It is normally part of a large suite of materials that may include a student manual, a teacher's guide, a workbook or worksheets, audio cassettes, audio CDs, videos in one or more formats (PAL, NTSC), and private study CDs. The complexity and high production and distribution costs of such materials help explain the publishers' need to control and protect their investment.

Dividends and stimulus to progress

Commercial Publisher

For the commercial publisher, there is a one-to-one correlation between the financial success of a venture and continued commitment to it. This is why large-scale market research is indispensable in the planning stages, and it accounts for the relatively small number of full language-learning courses in the catalogues of even the biggest and most specialised publishers, the relative insignificance of CALL materials within those packages, and the pressure such publications can exert on small, peripheral dispensers of foreign language instruction to conform, or endeavour to conform, to the norms established by the countries or institutions whose students represent the bulk of their paying customers. There is also a sense in which a degree of obsolescence is commercially desirable. Textbooks are recyclable. If a school purchases a class set, it can serve for many years. Should a particular method lose favour with the public for whatever reason, it will be replaced by another (i.e. new sets will be purchased), generating greater returns than if the status quo had persisted, and publishers are always keen to demonstrate that they can supply the innovative or fashionable product, and to increase their market share.

Teachers and Institutions

In cases where the teacher-academic's involvement with CALL is limited to cost-neutral exploitation of resources and infrastructure made available to the establishment as a whole, universities and similar institutions are inclined to tolerate and even encourage the research and development activities of their staff, and to use any celebrity accruing from it to enhance their image and to attract support. But the days of institutional infatuation

with technology for its own sake would appear to be in the past, and in cases where tangible and ongoing returns cannot be demonstrated for resources invested in CALL, institutions seem increasingly less disposed to dedicate resources to fund further ventures or even to maintain existing ones. Academics are thus more and more likely to be called on to provide some form of 'market research' to demonstrate the material, scholarly or educational benefits that will flow from any new project.

Only an extremely small proportion of the teachers of a given foreign language ever produce wide-circulation textbooks. But virtually every teacher at some time or other use their linguistic, pedagogical, and technical skills to create resources in the hope of improving their students' learning outcomes. Occasionally these are computer-based. The more focused the project, the fewer resources it is likely to demand and the less susceptible it is to distortion by outside influences. As such projects do not represent commercial enterprises and are so small-time that they occur below the level of institutional consciousness, they are often little-noticed. But they are the ones that best illustrate the typical teacher-developer perspective on input (professional energy and personal intellectual commitment to the assignment) and dividends (improved teaching) in the creation of CALL materials. The lifespan of a textbook rarely exceeds 10 years. This obsolescence may be due to changes in theories and practices of language teaching, the relevance of images, themes, or sociolinguistic elements, and, in the case of CALL elements, incompatibilities with new standards, platforms, operating systems, modes of delivery, or institutional preferences. In the case of print materials, visual aids, transparencies, audio recordings, or even creative board work, ongoing serviceability of a resource over the teacher's career can justify what may have seemed like an inordinately heavy personal investment at the time of initial production. The pace of change and the staggering diversity of hardware, software, and concepts in the world of IT mean that it would be almost inconceivable for a computer-based aid created in 1970 or 1980 to still be in service post-2000. This capacity of external factors to make something materially obsolete when it is still pedagogically valid can create a sense of futility in teacher-developers, a feeling that the world of technology conspires to stifle their investment and commitment. Print materials are more or less constant. Teachers developing resources on that platform can devote all their energies to content and technique. IT, however, being far from static, requires teacher-developers to keep pace with concepts and techniques that may well not come naturally to them, but which have been adopted because they offer some pedagogical advantage. In the end, however, individual teachers may end up, like commercial publishers, making sparing use of CALL, and disinclined to be adventurous with it. The investment they are guarding is different, but the end result of protecting it is similar.

Concluding remarks

In many traditional Humanities areas, to talk of productivity in the same breath as research and scholarship are viewed as a degrading commodification of knowledge. But in creating CALL materials one is not just configuring knowledge, one is also creating a device for dispensing it. If the dispenser takes 2 years to produce and is unusable 12 months later, the experience will act as a deterrent to further ventures in the field. In the same way, as it makes little sense for educational institutions or commercial publishers to ignore the

perspective of the teacher-academic, it is dangerous for the latter not to take account of productivity during the planning process.

Taking a realistic look at who will be able to benefit from teaching materials and for how long, and giving serious consideration to by-passing any processes or devices that can reduce the lifespan or currency of the materials is far from wasted effort. It will benefit students by giving them a lasting resource. But more importantly, it will provide a platform on which to build realistic appraisals of the ongoing value of externally-produced materials, and it will do much to protect the teacher-developer from becoming jaded, embarrassed or frustrated by a sense of wasted effort in a climate where an increasingly higher institutional expectation of expertise is paralleled by a reduced tolerance of the process of learning through mistakes.