This document proposes that teachers need to do more than use computers and other technological tools in classrooms and in their professional work. It emphasises that teachers need to understand the global and local contexts that are contributing to the changing society that supports and surrounds schools. It is from this base of knowledge that teachers can understand and support the rationales for incorporating computing technology into schools, can interpret curriculum documents and can make appropriate decisions about their roles and the activities students might undertake that enhance their learning. Further, they can then understand the importance of focusing on processes that will help students contribute to, and participate in, the Australian community and workplaces. This document therefore has a broad focus that suggests a dual role for teachers, not only in the lives of students and in supporting the local school community, but also in the role of schools in Australia's strategic future.

Improved learning is a product of teachers using valid, appropriate strategies that are formed by an understanding of the available educational resources including technology. Teachers cannot develop these strategies from a technology-bereft position and without professional development to help them build a learning technology process.

Issues prompting this document
This document is therefore a reaction to three issues:

- that some educational systems are developing statements that define teachers’ learning technology competence, to encourage teachers to use information technologies in schools,
- that national reports on Australia's future define a role for schools and teachers, and
- that a number of non-systemic stakeholders have concerns about teachers' welfare. The profession needs support, as it strives to match community expectations in increasingly complex working and learning environments.

The Australian Council for Computers in Education (ACCE) is strategically placed to collate the views of stakeholders and to provide direction for educational systems, professional development providers and groups of educational professionals as they design support systems for teachers working in Australia's schools.

Purpose of the project underlying this document for ACCE and other stakeholders
This document provides both a framework for systems to interpret existing policies and to develop and implement new policies and programs. It also provides other stakeholders with directions on how to build support systems and programs for teachers and provides teachers with a context in which to interpret their work. ACCE, together with the Australian Computer Society and the Australian Education Union, is concerned about the lack of collaboration between groups building learning

AUTHORSHIP:
Sections of this document were produced by Michelle Williams, ACCE president, and Ken Price, TASITE. Contributions and editing suggestions were made by ACCE board members. The document was shaped by feedback to earlier drafts from the wider education community, prompted by the member organisations of ACCE.
technology teacher competency policies and hope that this document will continue to encourage dialogue begun at various ACCE events in 1998.

It is the purpose of this project to maximise information and debate about Learning Technology Competencies for teachers between the stakeholders.

Stakeholders include systems, employer groups, unions, professional associations and educational councils, school administration teams, educators, teachers in training, parents and students.

This document provides advice and information for debate. Educators will be able to debate issues related to Teacher Learning Technology Competency movements. A website enables groups to draw attention to their work in the area and develop an audience and forum for their ideas. Educators and other stakeholders will be able to access information and suggest ideas to ACCE for progressing the movement in Australia.

While there may be an expectation from education systems for ACCE to produce a definitive list of teacher competencies, such a list would of necessity be a compromise and could at best reflect only a view at one point in time. In many ways this could prove dangerous. Without careful consideration of the purpose of such competencies, they cannot be adopted at a system level. Each education system will have its own imperatives and priorities, and will be faced with the task of developing its own implementation of teacher competency policies in using learning technologies in teaching and learning. This document should provide a framework to assist that process.

The scope of learning technology

Learning technology has a range of purposes and possibilities. These include the following:

• Learning technology can enable teachers to address goals across all curriculum areas simultaneously.
• Each curriculum area can benefit from the integration of learning technology.
• Use of learning technology processes can provide strategies for achieving curriculum goals within a curriculum area.
• Learning technology processes are also applicable to the specialist programs of computer studies and IT applications in disciplines.
• Learning technology processes can reflect authentic processes in the marketplace, community, workplaces and lifestyles of Australians.
• Learning technology processes can accommodate developmental needs and a range of pedagogical theory.
• Learning technology can relate to the processes of lifelong learning and curriculum renewal.
• Learning technology can provide students with life skills.
• Learning technology relates directly to the process of improving Australia's position in the global marketplace and community.

A note on terminology

This document needs to use terms that have differing meanings in different contexts. It is hoped that the ethos of the document unites the readers and stakeholders to accept its intent, and that critiques of terminology do not sway readers to devalue its importance and role. Two terms have been adopted in this document that may help readers understand its purpose: learning technology and teachers' learning technology competencies. It is important to articulate our interpretation of these terms early in the document.

The term learning technology, adopted by many educational systems and stakeholders, represents a process. It reflects a holistic picture where humans are engaged in activities and strategies for working and thinking while using technological tools and processes. For educators, the term includes the learning processes, where students are engaged in educational activities while using technological tools and processes. Inherent in the term is the danger that "technology" can mean so many things - the artefacts, the definitions that represent the Key Learning Area called Technology and the processes that are also called technology under the United Nations definition. Using technology as an adjective further complicates the reader's task. We expect that the context of our dialogue and the ethos of this document enables readers to derive meaning.

The use of the notion of "competence" in the context of teacher's learning technology competencies raises some problems. For some people, the notion of competence deflects from a holistic view to one diminished to a list of skills and for others it represents a strategy for defining professional standards. Some state systems have adopted the term "capabilities" to help educational communities understand the competency movement in Australia as a professional development strategy and not a testing mechanism. In this document, teachers' learning technology competencies is used to embrace professional competence that teachers exhibit when engaged in learning technology processes, for their professional work, in their workplace and in classrooms. The term "competencies" is used in most national and state government documents and international documents, and thus is adopted here to reflect the familiarity the term appears to have globally. ACCE is concerned that a teacher's learning technology competence includes an understanding of the global and local contexts that surround schools and education.

This document uses the term information technology (IT) to encompass information and communications technologies used in the community. The convergence of communications and computer technology in the information technology industry means there is little sense now in distinguishing stand-alone artefacts from connected ones. Further, the systems of connected environments alter the scope of how IT is understood and used. Such a broad definition also encompasses the range of systems that are not included in traditional computer formats, such as "embedded" computer technology in automobiles, household appliances and personal tools, and encompass the software, hardware and human systems which contribute to a technological environment. The broad definition for information technology used here is compatible with that adopted by most national documents in the IT industry (NOIE 1998, NBEET 1998).