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Professor Tak-Wai Chan
Center for Science and Technology for Learning
National Central University
Chungli, Taiwan, 320

Dear Tak-Wai,

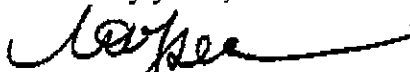
I am pleased to be asked to write a letter in support of your proposal to the *National Science and Technology Program for e-Learning* (Theme: Advanced Learning Technology) entitled: **Building Learning Companion in Learning Context Supported by Wireless, Mobile, and Digital Tangible Technologies—contributing to G1:1—a global network of collaborating researchers and test-beds.**

It was exciting to read about your plans, which relate in a fundamental way to my own research on 1:1 computer learning using advanced technological systems in a mobile-learning framework. During the past year, our Stanford Center for Innovations in Learning has conducted a Gaming-to-Learn conference for research and industry, and I co-lead our Media-X Industry Partners Program, and in both cases I can tell you that the concept of "learning companions" is one of the important problem areas that leading researchers are discussing (e.g., Nass, Reeves, Cassell, Johnson, Graesser). Virtual characters can provide important aides to learning in a variety of participative roles in learning arrangements, whether in or out of school, such as collaborator, guide, tutor, co-

learner, and so on. The design of virtual characters involves ambitious convergence of emotional computing, dialogue systems, interaction design, and learner personalization. In addition, your proposal of using wireless sensor networks, context-aware environments and digital tangibles to extend the learning companion paradigm is important and innovative. Again, I know from our Stanford collaborations with several toy companies that this is an active and exciting area for research investigations, with many unsolved problems (e.g., I work with Fisher Price, Sesame Workshop, and Mattel in our Media X partnerships).

With this letter of support, I'd like to express my interest in advancing our collaboration in defining research problems, literatures, methodologies, and studies for the mobile learning frontiers work that we have been discussing. The success of your proposal would be vital to our ability to continue such collaborations, especially relating to doing empirical or theoretical work and writing together. I find exchanging research approaches, results, and critically appraising evolving products with you to be a very valuable and mutually beneficial activity. I also see great promise, if funding is provided, in the prospect of reciprocal graduate student exchange and co-advisement.

Sincerely yours,



Roy D. Pea, D.Phil., Oxon.
Professor of Education and Learning Sciences
Director, Stanford Center for Innovations in Learning
Co-Director, Stanford Media-X Industry Program