

James L. Fozard PhD as educator in gerontechnology

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H.Bouma, J.Rietsema, P-C. Tuan. James L. Fozard PhD as educator in gerontechnology. Gerontechnology 2010; 9(3):361-364; doi:10.4017/gt.2010.09.03.007.00 The important role of Jim Fozard in the teaching of gerontechnology is sketched. As from the very start of gerontechnology in 1991, he has pioneered in shaping its foundations and educating students. His background in longitudinal studies gave him expertise in multidisciplinary studies, which he brought to bear on teaching gerontechnology to both initial and graduate students in several countries around the world. He successfully bridged the generational cleft, so important for researchers in understanding gerontechnology and its interventions and harvesting its fruits.

Keywords: education, generations, students, multidisciplinary

In 1991 the basis of gerontechnology was laid at an international conference in Eindhoven¹. Jim was invited as expert on longitudinal studies. At the conference, his educating skills became manifest. Also, he himself turned out keenly aware of the importance of education. Soon the necessity of training and education became clear. Jim accepted the invitation to spend the year 1993/1994 at the Institute of Gerontechnology at Eindhoven University of Technology, The Netherlands, where he turned out to be an excellent educator. Jim invited colleagues of different disciplines to lecture. He stimulated and participated in the development of a curriculum, post-graduate courses, and specialised courses. Ever since he has continued doing so, for example by teaching master classes and guiding graduate students in their PhD research in The Netherlands, Florida, Taiwan, and elsewhere.

INTERDISCIPLINARY ENDEAVOUR

An important factor is the widely interdisciplinary nature of gerontechnology, well documented in this journal². Gerontechnology starts at the ambitions and requirements of ageing persons, about which insights are to be gained. This is concerned with processes involved in getting older: physically, mentally, socially, medically. Interactions between such aspects have been discovered, usually such that healthy habits in one domain exert positive influences in other domains. Among the scientific disciplines involved are physiology, psychology, sociology, and geriatrics. Jim's initial education was in psychology and his experience in longitudinal studies in general has made him knowledgeable in other disciplines of human ageing as well.

The success of a new multidisciplinary area, i.e. gerontechnology, is not only based on

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research in the existing underlying knowledge areas, but requires collaboration between dedicated researchers of different disciplines with specific skills and a broad area of interest. Evidently, training and education should be tailored to the needs of the target group. For example, engineers need another orientation in gerontechnology than psychologists, designers or care professionals. For this reason a modular or building-block approach was chosen for the curriculum development. Each module represented a fundamental category of information - basic concepts of gerontechnology, information about ageing, information about technology and pragmatics of gerontechnology - that can be adapted to the specific education situations. As a visiting professor at Eindhoven University of Technology's Institute for Gerontechnology Jim was a leading

member of the group that shaped this approach which has been the basis for several successful efforts in Europe³⁻⁵. Examples are postgraduate courses at the Eindhoven University of Technology (The Netherlands, 1993), the University of Oulu (Finland, 1994), Erasmus Intensive Programme at Liverpool University (UK) and Eindhoven (The Netherlands, 1997-1999), and the Masters degree on Human Ageing at Arcada Polytechnic (Helsinki, Finland). From 2007 onwards, at Nan-Kai university of Technology in Taiwan, he gave yearly courses and took part in the master classes on Gerontechnology and Service Management, supervised graduate students and encouraged faculty in their research to create knowledge and ideas in gerontechnology; in 2009, 32 students and 83 staff members attended the master class and other courses that he taught (*Figure 1*).



Figure 1. James L. Fozard is presented with a dedicated poster at the last class of his 2009 Gerontechnology course at the Graduate School of Gerontic Technology & Service Management of Nai Kai University of Technology, Nan Tou, Taiwan; From left to right: Jonie Lee, Vera Cheng, WC Chiou, SX Chu, SC Lai, ML Wu, TC Lin, Tina Hua, WH Lee, SC Lin, Jim, YL Chenh, and CY Gu (Photograph by MY Wu)

THE GENERATIONAL EFFECT

In 1991, Jim had been invited at the Eindhoven conference because of his expertise in longitudinal studies. Longitudinal studies of people are special in that the sociological generation of participating subjects remains constant over the years in a changing environment, whereas in horizontal studies subjects of different ages usually have similar environments but they are of different generations. Consequently it is in longitudinal studies that ageing processes of real subjects are the direct objects of study. Many of these processes are long-term, which is why longitudinal studies are so important. From his full time position in the Baltimore study of ageing, Jim had a wide knowledge and experience in longitudinal studies in general whereas his speciality as a trained psychologist were also physiological aspects, in particular perceptual and motor faculties, among which the general slowing of functions, the decreased ability to withstand stress, the increased prevalence of chronic diseases, and the predictive power of physical fitness⁶.

In experimental ageing studies, the distinction between longitudinal and horizontal is important since people of different generations are indeed different: earlier experiences and environments may exert a thorough influence all through one's further life. Consequently, it is not self-evident that teachers can teach students of later generations properly. For fruitful teaching, they have to bridge the generation cleft with their students, or, in more direct terms, they must understand the different starting positions of the present students as compared to those of their own past. This is specifically the case in the subject matter of human ageing. The royal road to overcome the barrier is establishing face-to-face communication with the present students, certainly a special skill of Jim that he brought to bear. It is in the direct communication between one teacher and a few students or a single one only, that the generation cleft may be explored, made explicit, and bridged. Obviously, teaching

classes of many students at a time cannot quite cover the requirement.

Basic ingredients for teaching scientific subjects remain classes, books, scientific papers, and readers. Because of the enormous data base on Internet, these are available more easily than before. But there is a caveat. The amount of information is so enormous, that selecting the proper information from the sea of 'noise' requires more guidance than ever. And often the information carries no quality tag such as peer review that helps selecting reliable from less reliable sources. So the skill of selectivity is ever more needed. Since this skill is to be exerted content-dependent, the scientific teacher and the scientific student have to share expertise both in content and in scientific methods. This is where the one-to-one or one-to-few communication is superior. The student will perhaps be more skilled in surfing the Internet, and the teacher in a better judgment in the selection process; at the end of the day the student has learned a better skill of selectivity and the teacher perhaps a better skill of surfing the net. At Nan Kai University, Jim took great effort in mastering the new communication media that the students used among themselves.

NURTURE AND NATURE

Most ageing processes are sensitive to the environment in which people age and here is where technology comes in as a driving force behind the profound changes experienced both by individuals and expressed in the organization of society as a whole. Since the present persons of age have grown up, the environment has changed almost beyond recognition, as grandparents may experience when trying to explain and clarify to their grandchildren both circumstances and tools, and the absence of circumstances and tools, of their youth. For example, 60 years ago yes there was radio, but no TV, yes fixed telephone but no cell telephone; yes daily newspapers but no computers, Internet and SMS; yes regional trains, busses and boats, but no affordable air travel. There

is the everlasting discussion about nature or nurture as decisive factor in growing up; the summing up is that the essential constituting factor is in the interaction between person and environment. And the environmental factor that has changed most dramatically is the availability of products, services, and infrastructures resting on technical innovation⁷. The crucial factor is the functionality in itself, closely followed by the user interface intended to make the functionality available to the user, both aspects contributing to the difference between generations.

Jim knew about the importance of the environment and thus was excellently suited to bring this experience to the teaching of technology students. Technology students usually have only slight notions of older persons as such, let alone about long term processes of development and ageing. Jim took the methodology of ageing studies to the subject matter of technological innovation and so helped technology students find and adapt the necessary methodology

for serving ambitions and needs of ageing persons. Having no technology background himself, he collaborated closely with teachers of technology. Also he was a master in ongoing discussions with his colleagues from other initial disciplines. This has made Jim a pioneer in mapping out the innovative content of gerontechnology as a broad and interdisciplinary effort. This in itself is a first order educational accomplishment.

CONCLUSION

Over a period of 20 years, Jim Fozard has proven passionately devoted to gerontechnology education. He has made essential contributions to the theoretical foundations, has created knowledge and ideas, has helped to develop an interdisciplinary curriculum, has taught in courses and master classes in Eindhoven, Florida, and Nan-Kai, and has guided and supervised a great many graduate students. Following our colleagues from Taiwan, we wish Jim good fortune, prosperity, and longevity in this Chinese year of the tiger.

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