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CALVIN CHAN FOR THE STRAITS TIMES

# A place for seniors in the Smart Nation

By Calvin Chan For The Straits Times

As Singapore transforms itself into a Smart Nation, it is good to know that senior citizens are among its key beneficiaries.

HDB is piloting the Smart Elderly Monitoring and Alert System, which detects abnormal behaviours of elderly folk who are home alone. The hospitals are piloting "tele-rehab" systems, which enable therapy sessions to take place remotely, reducing the travel time and inconvenience for the less mobile.

"Silver Infocomm Junctions" will be set up to help the less tech-savvy senior citizens acquire IT skills, and "Citizen Connect Centres" will be in place to provide access to online services for those without IT devices.

In his speech this week at the launch of the Smart Nation initiative, Prime Minister Lee Hsien Loong highlighted: "When we have IT, we want it to be accessible to everybody and we have to prevent a digital divide from turning up in Singapore - between those who have IT and can afford it and know how to use it, and those who do not have IT or do not know how to use it."

While training our seniors in IT skills and enabling access to IT are vital, there are other aspects that should also be addressed to prevent a "silver" digital divide in the Smart Nation.

Culture is key

A CROSS-DISCIPLINARY team of researchers at SIM University (UniSIM) - from diverse fields of anthropology, gerontology, human factors, and information systems - has recently concluded a two-year study on the usage (or non-usage) of IT devices and online services among Singaporeans between 55 and 75 years old.

About 700 people participated in this study, which is supported by Council for the Third Age, Presbyterian Community Services, RSVP Singapore and Thye Hua Kwan Moral Charities, and funded by UniSIM.

The results pointed to two key aspects that correlate with use of IT among senior citizens in Singapore.

The aspect with the strongest correlation is culture, which considers items such as English proficiency. English dominates as the lingua franca of most online content in Singapore, including popular banking and government online services. Seniors with poor command of English may hence lack motivation to use IT.

Interestingly, the lack of innate motivation may be compensated when there is prior exposure to IT at the workplace. This suggests that the value of exposing seniors to technology in their work is not only about productivity gains and economic returns, but also an investment in preventing a "silver" digital divide as we transform ourselves into a Smart Nation.

The aspect with the second strongest correlation is social, including items such as the support seniors get from their friends and family in using IT. Evidence suggests that some seniors develop a fear towards technology due to discouraging messages. Examples are "This is not for you", "You'll not know how to use it", or "Don't touch it. You'll spoil it".

Such stereotypical notions of senior citizens as being technologically inept need to be overcome. Family members and the society at-large need to be more mindful and encouraging in supporting senior citizens to bridge the digital divide.

## Adaptive design

CONTRARY to common assumptions, the study revealed a non-homogenous state of IT usage among senior citizens in Singapore. There are senior citizens who are highly tech-savvy and use all sorts of IT devices, and there are those who have never used IT.

A key challenge when designing IT is catering to this diversity of capabilities. A prototype tested in this study indicated that adaptive design can address this challenge and ensure that varying expectations of usability and user experience across the spectrum of senior citizens are met.

Adaptive design is about designing interfaces that adapt to different user profiles.

For example, for a senior citizen who is less dexterous and is not tech-savvy, the display interface can be presented in large fonts and buttons, with a simple layout.

However, if another senior citizen who is fit and highly tech-savvy uses the same device or online service, the display interface can morph into regular fonts and buttons, with a more sophisticated layout.

## Senior-friendly features

THE prototype also tested senior-friendly features such as on-demand video help. Most senior citizens indicated a preference for receiving support from a real person rather than reading text instructions. The on-demand help included the video of a person offering advice and demonstrating how to resolve certain issues.

This was well-received by the senior citizens as it points to the possibility of describing their problems using natural speech.

As Singapore progresses towards the vision of a Smart Nation, our ageing population accentuates the importance of preventing a "silver" digital divide.

To complement existing efforts in providing senior citizens with IT skills training and affordable access to devices, a more encompassing effort would be to also address the cultural and social aspects. Even in the development of hardware devices and online applications, more thought could be invested into incorporating adaptive design and senior-friendly features.

These will go towards ensuring Singapore becomes an inclusive Smart Nation where no one is left behind.

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