

# Outdated digital literacy skills hinder use of smart devices

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Activity trackers are rising in popularity: Almost 20% of people own one. These trackers collect data about physical activities and assist in developing a healthy lifestyle. Yet a study conducted by the University of Twente demonstrates that many struggle to optimally use these devices. The cause? Outdated digital literacy skills.

Under the guidance of Alexander van Deursen, UT scientists are conducting plenty of research into digital literacy. The ability to use [data](#) and being digitally literate is vital to the continued development of the Internet of Things. For example, a user must be able to analyze the flow of personal data their activity tracker provides them in order to optimally benefit from using the [device](#).

## **The rise of activity trackers**

At this time, approximately 19% of the Dutch population is using an activity tracker. These trackers constantly collect data about users' [physical activities](#), such as heart rate, calories burned, and sleep patterns. Using these data, users will be able to live a healthier life and exercise more efficiently as long as they are able to correctly interpret the collected data and the way in which the data is presented. Only then will they be able to use these data to make informed decisions and act accordingly. In short, the use of smart equipment requires data analysis skills and strategic skills.

## **Performance measurement**

In a [performance measurement](#) conducted among a hundred people (of different sexes, ages and with a variety of educational backgrounds) participants were fitted with an activity tracker for a number of weeks. After familiarizing themselves with the activity tracker, participants ended up participating in a task-based performance measurement used to test data analysis and strategic skills. The participants completed on average approximately half of the data analysis tasks and half of the strategic tasks. Both the insight into and interpretation of the collected data, as well as the ability to formulate specific goals to improve their health, turned out to be problematic for participants. The results show that participants were only able to parse the data collected by smart

devices to a certain degree and make decisions accordingly. The level of data analysis and strategic skills proved to be insufficient.

## Needs

The conclusions from the performance measurement underscore the need for skills development relating to the use of smart devices such as [activity trackers](#). The current skills level demonstrates that the use of the options provided by these devices is not optimal. The elderly and people with lower levels of education performed relatively poorly. This is problematic as these target groups may benefit the most from the use of smart devices. An activity tracker can promote physical activity, for example, something that declines with age, particularly among those with lower levels of education.

Alexander van Deursen, Assistant Professor of communication studies at the University of Twente and principal researcher on the project:

"Policymakers who focus on digital inclusion will have to start paying attention to the rise of smart devices and the IoT in addition to improving digital literacy for internet usage. The autonomous character of many of these devices does not mean that digital literacy is less necessary in this regard. Policy can start by focusing on the improvement of data analysis and strategic skills."

**More information:** The study is part of the Any Thing for Anyone project that is part of the Dutch centre for digital inclusion. The project researches digital inclusion as it relates to the rise of smart devices and the Internet of Things. [www.centrumdigitaleinclusie.nl/](http://www.centrumdigitaleinclusie.nl/)

Provided by University of Twente

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