

Inflexibility may give pupils with autism problems in multitasking

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Young people with autism may find it difficult to multitask because they stick rigidly to tasks in the order they are given to them, according to research led by an academic at the University of Strathclyde.

The study also found that difficulty with 'prospective memory'- remembering to carry out their intentions- may contribute to the challenges they face.

The researchers presented the pupils with a series of tasks, such as collecting and delivering a book and making a cup of hot chocolate, to be carried out within a time limit of eight minutes. These activities were carried out in a computer-generated [virtual environment](#).

They found that the pupils did not appear to deviate from the order in which the tasks were listed, although doing so could have saved them time. They also broke several rules for the tasks, notably only being allowed to go up one staircase and down another.

An equal number of pupils with and without [autism spectrum disorders](#) (ASD) took part in the study. The researchers will be exploring further the causes of the pupils' problems with [multitasking](#), in areas such as planning, memory, [time pressure](#) and [inhibitory control](#).

Dr Gnanathusharan Rajendran, a lecturer in Psychology at Strathclyde, led the research, which also involved the University of Edinburgh and Liverpool John Moores University. He said: "Our research offers a real

insight into the problems young people with autism have with multitasking and points the way to further investigation for possible solutions. By using, for the first time, a virtual environment, we have been able to examine what may lie behind these problems more closely than might be possible in a real-world setting.

"The pupils with autism achieved tasks when they were given to them singly but difficulties emerged when they were asked to interleave the tasks with each other. There was no difference in the time taken by the groups but the [pupils](#) with autism completed fewer tasks.

"The exercise could help to deal with these multitasking problems. The tasks or their environment could be changed to see if there is any influence on the outcomes and they could also be a tool for teaching and training."

More information: The research paper, 'Investigating multitasking in high-functioning adolescents with autism spectrum disorders using the Virtual Errands Task,' has been published in the *Journal of Autism and Developmental Disorders*, [DOI: 10.1007/s10803-010-1151-3](https://doi.org/10.1007/s10803-010-1151-3)

Provided by University of Strathclyde

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