The study involved NBN-connected schools, including Willunga High School, South Australia and Presbyterian Ladies College, Armidale, NSW.

At Willunga High School, students who are connected to the NBN both at home and school moved from delivering C-grade work to achieving A-grade results in the course of eight weeks.

Principal Janelle Reimann said, "The NBN has facilitated a revolutionary change in the delivery of content and co-contribution of learning input. Students who used to hand in C-grade work are now producing A-grade work."

Kate Comick, general manager of education at NBN Co, said this is the result of more collaborative learning approaches which teachers have adopted through the reliable high-speed broadband connection.

Comick said teachers can engage and stimulate today’s tech-savvy students via the NBN with visualisation tools, such as 3D video, to help them grasp difficult concepts or view realistic environments.

"Services provided over the NBN will open up better learning opportunities for all Australians and can help equip all our students with high-quality skills for the 21st century," she said.

Teachers were surveyed on the potential value of the NBN in schools. They were asked how the NBN may improve their own professional development, and how it will enable them to teach in more powerful ways. They were also asked how high-speed broadband could increase the quality of students' work.

"The results were overwhelmingly positive," she said, as 96% of teachers said the NBN may help students achieve more and increase their work quality, while 86% per cent said, "It would help them to teach in more powerful ways."

"Strong anecdotal evidence provided by teachers also suggests that the NBN may greatly benefit students' learning and motivation, both in the classroom and at home," said Comick.

Afterwards, the teachers integrated the NBN into lessons and homework activities.

PLC Armidale students were able to connect with experts at UNSW’s Museum of Human Disease to see dissections of healthy and diseased hearts via HD videoconferencing.

Comick said, "Today’s students are tech-savvy – they are constantly collaborating outside the classroom via social media and other forums and they demand the same level of collaboration and potential for self-directed learning in the classroom."

The NBN has given teachers the potential to meet this demand through immersive and interactive learning experiences that spark students' curiosity and enthusiasm in science, inspiring them to pursue excellence in the field, she said.

The Department of Broadband, Communications and the Digital Economy said, "The NBN will help remove many of the barriers to education such as distance, time and cost."

"This is particularly significant for people living in regional and remote areas, who may not be able to access the specialist training that is available in larger cities."

The government also understands that education no longer stops at the school gate. That's why it is important to have the NBN rolled out to all Australians. It will help extend learning to the home and workplace and provide everyone with richer and more flexible education opportunities," the department said.

For example, Year 10 students in Willunga (SA), Gungahlin (ACT) and homes in northern Tasmania are taking astrophysics classes over the NBN, delivered by the John Monash Science School in Melbourne. The Sydney Opera House will also use the NBN to conduct virtual performing arts workshops led by companies such as Bell Shakespeare and The Australian Ballet, and eligible new migrants are participating in a trial of high-quality English language tuition through virtual classes.

The nationwide rollout is due to be completed by 2021.