Looking to the Future: A Case Study-Driven Insight into Pedagogical Strategies to Motivate and Guide Students with Asperger’s Syndrome through Their Dissertation

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Abstract
This paper reports a case study which offers insights into the complexities of supervising a student with Asperger’s syndrome through his undergraduate dissertation. It highlights certain problems with the dissertation, which are significant to Asperger’s syndrome, and begins to look into pedagogical and assessment strategies that can be put in place to address these issues.

A Brief Introduction to Asperger’s Syndrome
The condition was identified by Hans Asperger, whose paper, published in 1944, has become a landmark in the development of understanding of autism (Frith, 1991). Asperger’s syndrome (AS) is a lifelong disability within the autism spectrum and affects how a person makes sense of the world, processes information and relates to other people. AS is characterised by a triad of impairments: communication, social interaction and social imagination. However, people with AS are often of average or high intelligence but may have specific learning difficulties, such as dyslexia, dyspraxia and attention deficit hyperactive disorder (ADHD) (Rajendran & Mitchell, 2000; NAS, 2008).

There is confusion over the prevalence and gender distribution of AS. However, some data is available. Depending on the severity of the symptoms and on the views of the researchers involved, estimated rates of prevalence range from 0.4% to 1% of school aged children, with a male to female ratio of between 4 and 9 to 1 (Myles & Simpson, 2001; Dillon, 2007; NAS, 2008). However, it does appear that increasing numbers of children and youths are being identified with the disorder (Myles & Simpson, 2001). According to Martin (2008, p.23), ‘the increase in diagnosis since 1996 appears to be startling’.

Asperger’s Syndrome Support in the Education System
As more and more children with AS enter mainstream education, research has been undertaken on facilitating the inclusion of such pupils into primary and secondary schools (see, for instance, Hobbs, 2003; Farrell, 2003; Johnson, 2007). Much of this research has been directed towards the identification of support structures for social, behavioural and sensory issues (Myles & Simpson, 2001; Withers, 2009), although a particular area of research has been directed at using computer-based environments to teach AS pupils social skills (see, for instance, Gray, et al., 1991; Jones & Selby, 1997; Silver & Oakes, 2001; Kerr, 2005). Swettenham (1996) has suggested that computers are an ideal educational medium for individuals with AS, providing, for instance, emotional distance between the participants, and control over both the learning environment and the pace of progress.

Young people with AS are now successfully completing their secondary education and are moving on to further education establishments, with their numbers increasing each year (Martin, 2008). As a result, this has stimulated research into the integration of AS students...
into higher education and, specifically, into universities. A significant body of research has been directed at the resources necessary to support these students in such areas as transition and induction, study and organisational support, use of information technology, peer and mentor support, social skills support and test-taking strategies (De Montfort University, 2005; Rinaldi, 2006; Martin, 2008, Holzer, et al., 2009).

Some research suggests that computer-assisted courses and assessment would benefit university students with AS. Nevertheless, this assessment is contested. Some opponents of disability rights have argued that the necessary adjustments to the courses and the assessment processes would undermine academic standards and significantly alter the character of the courses involved (Konor, 2007). However, Konor (2007) concludes that such fears are groundless, as universities retain the responsibility of setting the academic standards of their courses and the freedom to allow disabled students to participate in higher education.

Methodology
The requirement to support an AS student with his undergraduate dissertation enabled the authors to undertake an ethnographic study into the pedagogical strategies required to motivate and guide the student (Elliott & Lukes, 2008). A case study approach was adopted, as Eisenhardt (1989, p.534) suggested this provided a ‘research strategy, which focuses on understanding the dynamics present in single settings’. Data was collected from: observations of the student; his interaction with his supervisor and learning support staff; minutes of meetings held with the student; emails and other correspondence exchanged between the student and the supervisor; and the student’s draft and final dissertations.

The Asperger’s Student and the Dissertation – A Case Study
A lecturer was first approached by a student to be his supervisor in November 2007, as she was already teaching him a third level module. He was from a different discipline, had put off finding a supervisor, and was therefore finding it difficult to find a lecturer who would support him. He disclosed that he had AS but was not receiving help from Student Support and was adamant that he did not require such support. There is no requirement for students to reveal any potential learning difficulty, and prior to the approach to the tutor this student had chosen not to declare his AS.

The student wished to write his dissertation on his ‘idiosyncratic pursuit’ (Ghaziuddin, 2005, p.46) based on a particular era in history. It was pointed out to him that this would be an essay based on his interest only, which was outside the bounds of his academic subject area. In order for the dissertation to be a meaningful piece of research, he needed to produce a product such as a website, the development of which would drive the dissertation. It was therefore agreed between the student and supervisor that he would develop a website aimed at teaching children about this historical era as part of their Key Stage Curriculum. Therefore, the website would provide a pedagogical need, and the student could indulge in his interest.

It became evident that the regular supervisory meetings were getting nowhere. Much time was spent attempting to get him to understand the abstract demands of a dissertation and he received far more than the allotted advisory time. The student had a very low attention span (Schatz, et al., 2002) and would often change the subject being discussed and veer off onto a more favoured topic. He was set targets to be met before the next meeting, but
mostly this work never appeared. It became difficult to critique the work that did appear without causing him great distress.

The student handed in the dissertation in May 2008. The student failed, as the work lacked content, rigour and understanding. The dissertation itself was muddled, incoherent, unreferenced and the website was just one unfinished page. He had received support far too late in the day for it to be effective. When informed that he had failed, he broke down and wept, having convinced himself that his work was good and would pass well.

The student went through the appeal process, and due to his disability and lack of disability support during the year, he was offered another attempt at passing the dissertation, marked as a first attempt, with the support of a Learning Support Assistant (LSA). Supervision commenced in earnest with the intention of meeting every two weeks. Each meeting was written up with targets set for the student. Unfortunately, these were often not met.

Toward the hand-in date it was decided that he needed to concentrate on the website design, as that was most lacking in the previous submission. He did get this largely finished, and he improved his work on the use of references and on justifying the content and design of the website.

The student was given a pass in May 2009 – due mainly to his tenacity in turning up for his supervision (there is a personal element within the dissertation marking scheme which assisted this) and an increase in the production and quality of the website. In all, it had taken two years for this student to barely pass his dissertation, and also a significant amount of lecturing and support time in doing so.

**Reflection and Identification of Problems within the Dissertation Process for the Asperger's Student**

The following table indicates the problems associated with the dissertation and AS:
The student’s dislike of social interaction and the resulting stress caused the student to delay contacting a supervisor until late in the semester. Should the supervisor be unaware of the student’s learning difficulties then further stress might well compound the situation.

People with AS have intense interests that are sometimes obsessive (NAS, 2008). The most significant problem identified with this student was his interest/idiosyncratic pursuit. Throughout his supervision there were problems trying to steer the student away from the idea that the dissertation was about his obsessive interest rather than the process of website development.

When finding references and initial information for the literature review, the student enthusiastically collected many items about his topic of interest, but failed to engage with the other subjects, needing significant guidance directing him to relevant areas of research, such as design methodology, learning styles, human computer interaction, and key stage curriculum, to name but a few.

When the dissertation was handed in, the title referenced the student’s topic of interest – with no reference to websites, or its pedagogical function. Within the abstract of 8 lines, the topic of interest was mentioned 4 times, and 21 times within the next 8 pages.

Literal interpretation, another AS trait (NAS, 2008), was a problem for this student. He was told that within the introduction it is pertinent for the writer to provide some personal
information as to why the dissertation is relevant to him, and how it may drive his career forward. This was interpreted literally, and demonstrated that the student was unable to relate his career choice to the subject area he was studying in the dissertation, and therefore he had provided inappropriate information.

Another problem was attention span. The student would very often, within supervision, manage to veer off the subject and spend time talking about his other interests, therefore breaking concentration on the task in hand. People with AS are often tired due to the physical demands of stressful situations, such as social interaction (NAS, 2008) and this was often seen in the student. It was therefore difficult to ascertain if he was taking in the advice given in the meetings.

It had been noted that the student had used social networking (blogging) within the module that he was also undertaking with the supervisor. This was also being used as a method of assessment. The student was enjoying this aspect of the work, keeping an online diary of his learning and interacting socially with his peers.

Recommendations

- Initially it was thought ideal to engage with the student’s interest to keep him focused and motivated. This experience advocates prudence in using the student’s main interest to drive a project forward – it may well hinder it.
- Information should be set out in a literal way with specifically defined objectives that are not open to misinterpretation. The literal interpretation of concepts is an advantage to the AS student, in that if objectives are set out as rules, these will most likely be acted upon as the student literally interprets them.
- Supervisory meetings tend to be stressful for the AS student – they need to be regular, same time, same day of the week, and in the same environment. Any change should be notified to the student well in advance.
- Lecturers need to ensure that identified students with AS are allocated a project supervisor, not left to find one for themselves, and that this is achieved very early on in the year.
- Any supervisory meetings should include a LSA with notes and targets written up.
- The use of computer-based learning and assessment may help alleviate the difficulties caused by poor interpersonal skills.
- Staff require training in order to support and understand the problems that AS students face when entering higher education.
- Provision of reasonable adjustments detailed below.

How to Take These Recommendations Forward

From these recommendations, it seems prudent to investigate how to set out continuous assessment exercises, which, embedded within Web 2.0 technologies (social networking), provide a pedagogical framework and evaluate their usefulness in teaching AS students.

Using assessment-based social networking would address:

- Problems of social interaction – the student would not have to interpret body language and social nuances. The student could communicate online, avoiding the stress of social situations, and over-stimulation in uncomfortable environments.
- Problems of interpretation – a literal framework of commands would mean that the student would respond to rules set out for him. This would take the form of a set of
e-tivities, which would eventually lead to the formation of a coherent structured piece of work.

- Engagement with like minded people – if all students are provided with the facility to engage in social networking with their dissertations, the student will not miss out on socialising, as he joins a community of practice. This could break down barriers and ease the student into actually forming friendships with his peers.
- Continual feedback – continual online assessment via commentary with every blog entry from the supervisor and peers. However, this would still be a significant sustained piece of independent work.

Conclusion
This paper has discussed the difficulties that AS students have to overcome if they are going to fully benefit from a university education. In the area of assessment it is apparent that extended pieces of project work with a significant written element are difficult for AS students, and the final mark received may not fully reflect the student’s capabilities.

Both the literature review and the case study suggest that computer-based learning and assessment systems might significantly help such students. This conclusion has resulted in a successful Anglia Ruskin University Learning and Teaching Fellowship application in order to research the impact of such methods on AS students' projects.

References


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