

Evaluation of SCHOLAR 2011 – Commissioned by Learning and Teaching Scotland¹ and Heriot-Watt University

Carried out by SQW

Executive Summary

Introduction

1. The SCHOLAR Forum (SCHOLAR) is a not-for-profit partnership between Heriot-Watt University and The Association of Directors of Education in Scotland (ADES). SCHOLAR is the legal vehicle established to transform educational practice, manage a professional development programme in e-learning for teachers and deliver large scale e-courseware at low unit cost. Since 2000 SCHOLAR has provided high quality, interactive web-based courses to the cohort of Scottish students studying for SQA qualifications to enter employment, further or higher education. Currently, SCHOLAR provides more than 30 courses at Intermediate, Higher and Advanced Higher in Maths, Sciences, Languages and Business to over 400 secondary schools in Scotland with over 100,000 registrations per year.
2. SCHOLAR provides access to portfolios in Maths and Sciences (Biology, Chemistry, Computing, Human Biology, Information Systems and Physics), Business Subjects (Accounting, Art & Design, Business Management, Economics and Psychology) and Languages (French, Gaelic, German, Spanish and ESOL) at Higher and Advanced Higher. Intermediate Maths and Intermediate Mandarin is also provided.
3. A key aim of this evaluation, commissioned by Learning and Teaching Scotland and Heriot-Watt University, was to measure the impact of SCHOLAR on learning and teaching in Scotland's secondary schools.

Profile of SCHOLAR usage

4. The usage statistics presented in this report does not include data on the usage of the recorded formative assessments or activity on the Web board. Where non-recorded formative assessments are incorporated into the web-pages, these are included in the usage statistics. In addition, where the generic passwords, which are issued to schools by SCHOLAR, are deployed for teaching in the classroom, these statistics would not feature in this report.
5. Following a major investment in content creation between 2007 and 2009, the majority of the Languages and Business Subjects have only been available since that time. This would influence the usage of these subjects especially subjects which were launched towards the end of the period.
6. The total number of SCHOLAR users increased by 22% in the two year period from 2007-08 to 2009-10. In ten local authorities, there has been a year-on-year increase in the number of SCHOLAR users. However, the overall profile sees the number of users rising from 2007-08 to 2008-09, but then falling in 2009-10. Meanwhile the overall cohort, based on the number of examination entrants in the same subjects, is steadily rising.

¹ Now Education Scotland.

7. Across the evaluation period, the subject in which SCHOLAR is most commonly used for online learning is Biology at Higher level. In Higher Biology, as in Computing and Chemistry, however, the total number of individuals using SCHOLAR appears to be gradually falling, while at the same time the total number of SQA examination entrants in these subjects is gradually rising. Conversely, the number of SCHOLAR users has risen significantly in French and also in Business Management.
8. While both the number of active SCHOLAR users and total number of SCHOLAR sessions have increased since 2007-08, the former has outpaced the latter, with a net fall in the mean number of sessions per active user. Students are enrolled with SCHOLAR for the subjects that are offered by SCHOLAR and registered with SQA. During the first few years that a new subject is available, there may be a gradual uptake by the schools and students whilst there is an instantaneous registration of the cohort of students.
9. In summary, while numbers of users overall are increasing, the intensity of SCHOLAR use – and the subjects in which it is being used – appears to be changing.

How pupils are using SCHOLAR

10. Use of SCHOLAR is evenly split between the classroom and independent learning out of school hours. Analysis of HWU usage data and our own student survey suggests that there is a broad 50:50 distribution between these two modes of use.
11. SCHOLAR is particularly well used to support pupils' examination preparation: 75% of pupils plan to use it for revision purposes prior to examinations and the majority are most likely to use SCHOLAR during examination leave than at any other time.
12. More than 60% of pupils plan to explore at least three-quarters of the SCHOLAR materials available in their subject/s, indicating that the majority of users use SCHOLAR in a consistent manner to complement their classroom-based work.

Impact of SCHOLAR on attainment

13. The data show a clear correlation between intensity of SCHOLAR usage and attainment results, with higher intensity users achieving better examination results across most of the evaluated subjects. However, it is crucial to note that we can only identify correlation, not causality, from this analysis. We cannot say whether the higher examination results arise as a result of more intensive use of the SCHOLAR website, or whether pupils accessing SCHOLAR more intensively are more likely to achieve higher examination results due to other characteristics. Multivariate regression analysis would be required to identify the characteristics (including SCHOLAR use) most associated with high attainment.
14. The data also seem to indicate a link between attainment and autonomous learning: those who use SCHOLAR in their own time (in the evenings and at weekends) appear to achieve better results than those who use it solely with their teachers during classes in school time. However, our case study focus groups with pupils suggest that such users are likely to be inherently more highly motivated already, and SCHOLAR may only be one factor in their performance.

15. Our research found that, of the subjects that were under scrutiny in this evaluation, it was in Biology that teachers were most likely to feel that use of SCHOLAR was having a positive impact upon pupils' attainment. By contrast, teachers of Computing were least likely to see a connection.

How teachers are using SCHOLAR

16. In science subjects, the animations and graphics in the online SCHOLAR are very highly regarded and used very often in class.
17. The SCHOLAR materials in languages are said to lend themselves particularly well to full independent study: that is, teachers thought that it is easier for pupils to study a language on their own using SCHOLAR (if it cannot be fully timetabled) than for them to use it in this way for a science subject.
18. As teachers have become increasingly familiar with SCHOLAR materials they seem to be able to 'cherry pick' what they perceive as the most useful elements for use in the classroom. Often this means using particular animations or simulations to illustrate certain topics in science classes. Some teachers may therefore be using the online resource less often than before, but using them in a much more targeted way.
19. Teachers' use of SCHOLAR for setting homework and assessments is variable. Some teachers appear to do this quite regularly, others do not. We have no evidence to suggest whether some subjects generate more SCHOLAR homework than others.
20. Many teachers use SCHOLAR with their pupils during scheduled library or tutorial sessions, to complement taught delivery during the rest of the week. Often, one section of the class is expected to work through SCHOLAR online resources while the teacher gives targeted support to other pupils.
21. The usage of SCHOLAR is recorded and provided to the Directors of Education. The statistics are expressed in terms of the number of accesses to non-distinct web pages and assessment items. In 2010/11 the number of page 'hits' was in excess of 8.5 million.

Teachers' plans for future use of SCHOLAR

22. Just over half of all respondents to our online teacher survey said that they planned to make more use of SCHOLAR next year than they were making in the current year. The common factors that appear to be influencing teachers' planned use of SCHOLAR across all subject areas are:
 - recognition of the inherent quality of SCHOLAR resources
 - awareness of SCHOLAR's role in developing independent learning
 - recognition of the usefulness of SCHOLAR for homework and assessments
 - perception that use of SCHOLAR may lead to improved attainment
 - reasons of cost-effectiveness -in the current economic climate, the cost of books and photocopying becomes prohibitive and online resources become more useful

- external pressures on class contact hours (reductions in staffing, pressures on teacher time, more composite / bi-level classes), leading to increased relevance of SCHOLAR in filling the gaps.

SCHOLAR's impact on approaches to teaching

23. More than half of all the teachers we surveyed plan to make more use of SCHOLAR next year than in the current year.
24. SCHOLAR is valued particularly highly by teachers of Chemistry. The SCHOLAR study guides have been very popular, and there is great disappointment in some schools that they are no longer available in this subject. In lieu of the printed versions the text versions are available as PDF files for downloading.
25. The IT infrastructure in some schools is a major barrier to increased use of SCHOLAR. Insufficient work stations/laptops, or unreliable in-school internet connections, are the main problem. Pupils' access to, and use of, technology at home is generally thought to be far superior to that which they can expect at school.

The wider impact of SCHOLAR

26. SCHOLAR is helping some pupils to take subjects that they would not otherwise be able to study due to timetabling restrictions. The resources lend themselves particularly well to the independent learning of languages, thanks to the 'step by step' structure of the materials. However, teachers do not want SCHOLAR to be regarded by senior managers as an alternative to taught classes; it should be regarded as a useful complementary resource, not a way of saving money.
27. SCHOLAR appears to be making a significant contribution to the development of autonomous learning, and thereby also contributes to the aims of the Curriculum for Excellence. For instance, 72% of teachers agreed or strongly agreed that SCHOLAR is playing an important role in encouraging autonomous learning amongst pupils. In addition, during the case study visits a number of teachers indicated that SCHOLAR was a very good way of introducing Higher and Advanced Higher pupils to the mode of learning they would need to adopt at university.