

ITEM Everyday

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Abstract: This paper argues that the use of information technology in educational management (ITEM) is an important component of the efficient and effective operation of a large K-12 school. Systems in place allow the development of a complete picture of a student's activities and teachers are better able to make decisions that helps each student reach his potential.

Keywords: Educational management, school information system, student attendance, student reporting.

1. INTRODUCTION

Without the use of Information Technology in educational management, our school simply cannot function.

Every teacher uses the Scotch Information System every day. Similarly, most of the non-teaching staff also use the system.

Discussion at the 2006 ITEM Conference seemed to highlight the promise of information technology in this context, but there were significant reservations about the current advantage of such technologies in educational institutions.

This paper asserts that the use information technology is of vital importance in the ongoing effective and efficient operation of a large school.

2. BACKGROUND

Scotch College is an independent K-12 school for boys located about 7 km east of the centre of Melbourne. There is an enrolment of 1,850 boys including some 165 boarders. It is the oldest school in the state of Victoria and one of the oldest in Australia.

Please use the following format when citing this chapter:

Baker, G., 2007, in IFIP International Federation for Information Processing, Volume 230, Knowledge Management for Educational Innovation, eds. Tatnall, A., Okamoto, T., Visscher, A., (Boston: Springer), pp. 153–157.

It has a reputation for academic excellence but is also prominent in sport, music and the services. It has a broad curriculum and each boy is encouraged to achieve to his potential in a range of activities.

3. SCOTCH INFORMATION SYSTEM

The Scotch Information System had its roots in the late 1970s and was first developed in the early 1980s. A more complete account of the development of this system appears in the 2004 ITEM Conference proceedings (Baker 2005).

Since that time, there have been significant upgrades to provide a more complete picture of a student's activity within the school.

The goals of the Scotch Information System include providing:

- Accurate, up to date and relevant data
- A web interface that is easy and intuitive for staff to use
- Access from different locations including staff desks, classrooms, outside the classroom on the campus, at home and from a conference outside the school
- Different access rights to the data depending upon the need
- Integration with other information systems across the school
- A complete picture of a student's activity within the school and that stays as a permanent part of his record.

4. BREADTH OF THE SYTEM

The system is based on the person as the central entity. A person can have many attributes. Once a person is created on the system, the record is stored permanently with the exception of those involved in the enrolment process that ultimately do not attend the school.

The system includes information about:

- Students
- Staff
- Alumni
- Parents

Relationships between people are captured in a structured manner to enable tracking of families over time. The concept of the "Scotch Family" is an important one within the school and we seek to develop and enhance life long relationships with those who move through the school.

5. COMPREHENSIVE REPORTING ON STUDENT ACTIVITIES

A comprehensive student reporting system provides teachers with the opportunity to get a more complete view of a student's activities. These reports include:

- Academic progress report (four per year)
- Academic subject report (two per year)
- Tutor report (two per year)
- Sporting team report (at least two per year)
- Music group reports (two per year per group)
- Musical instrumental report
- Activity report eg debating
- Service report eg social service, cadets (two per year)
- Boarding report (two per year, boarders only)

These reports can be accessed by teachers for any of the students with whom they interact. Reports can also be generated in a range of different groupings as PDFs for either printing or reading on line.

The reports retain links to the person record. Hence, these reports are available on line indefinitely removing the need to archive them.

Sporting teams are often used for alumni reunions. Once a student report is created for a sporting team, that entire team or the individual report can be accessed as required. Included is the facility to add photographs of teams or individuals.

6. STUDENT ATTENDANCE

The accurate recording and reporting of student attendances is becoming an important aspect of school life. Brian Pawson has reported on the system his organisation has built in New Zealand "to provide an end-to-end tracking system for pupil attendance." (Pawson 2006).

Whilst the concern about truancy as reported by other schools is not significant, it is important to know when a student is at school and to ensure that absences are followed up and accounted for.

The system that we have in place allows teachers to record student attendances in the classroom. These attendance records are immediately available throughout the school for all to see.

Each teacher is allocated a notebook computer and has a personalized logon to the information system. Access can be wired or wireless – a virtual private network provides security for wireless access.

The process involves the following:

- The teacher logs onto the system. This logon is personalized and his or her class is displayed.
- The teacher records any absentees and saves the information.

- Secretarial staff can check which classes have not had attendance information recorded. In these cases, the teacher is sent a reminder message via the use of a pager.
- Secretarial staff enter any absence information that has been received by the school by email, telephone or voicemail.
- Tutors follow up unexplained absences to ensure that all absences are displayed with an appropriate reason.


| | | |
|---|---------------------------|-------------------------------------|
| Current Role in School is Teacher | | Employment Status is Current |
|  | Summer Sport: | Badminton |
| | Winter Sport: | Soccer |
| | Other Sport: | |
| | Service: | Yr 10 Activities |
| | Person reports to: | Mr Savage |
| Qualifications: | BSc(JointHons) PGCE | |
| Mark Attendance Roll | | |

Figure 1 A teacher's logon page allows him or her to easily mark the attendance roll.

The system allows for a range of contingencies including:

- Students at excursions
- Students taking music tuition lessons
- Students involved in sporting activities
- Students away on camps.

The system provides:

- Accurate, up to date information
- Immediate feedback.

A range of reports on attendance and absence are available at the user's discretion.

7. TEST MATERIALS

A range of data gathered from external tests is available for use. For example, state wide AIM tests are conducted at Years 3, 5, 7 and 9. These provide scores on reading, writing and mathematic ability and can be compared to state and internal norms.

Other external test data is being collected and displayed. This type of data gives teachers the opportunity to compare "actual" versus "potential" on test scores and to better identify students who are under achieving.

8. KEY CHALLENGES

The volume of data is ever expanding. It is an ongoing challenge to be able to collect, store, manipulate and make sense of this data. Similarly, new standardized tests are being undertaken and government requirements on reporting are ever changing.

A key challenge is to be able to devise methods of determining when a student appears to be under achieving and to allow teachers to intervene to help that student achieve his potential. At the same time, the external data gives the school the opportunity to better understand the extent to which it adds value i.e. the extent to which students can achieve beyond their externally assessed potential.

9. CONCLUSIONS

The use of information technology in managing the school allows us to:

- Run the school effectively and efficiently
- Accurately track students' attendance in a timely manner
- Provide a more complete picture of each student's involvement in activities beyond the classroom.

In short, teachers are able to make better decisions about individual student progress and help students achieve their potential across a range of activities, both academic and co-curricular.

10. REFERENCES

- Baker, Greg (2005) *Developing an Integrated School Information System*, Information Technology and Educational Management in the Knowledge Society, Tatnall, A. Osorio, J., Visscher A. (2005) Springer Science & Business Media, USA
- Pawson, Brian (2006), *Absence Makes the Phone Ring Yonder: An end-to-end attendance recording and tracking system*. Published elsewhere in this volume.