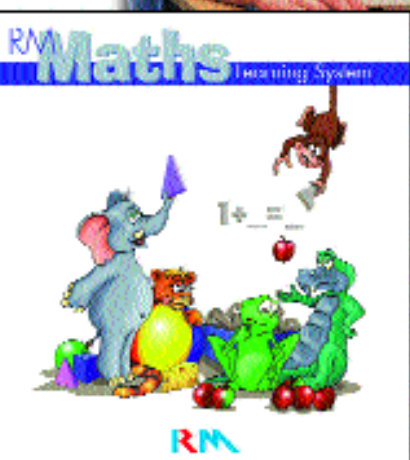




The RM Report 1999

Computers in Literacy & Numeracy in Primary Schools



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The RM Report on

Computers in Literacy and Numeracy in Primary Schools

INTRODUCTION



Richard Girling,
Chief Executive, RM plc

The RM Report on Computers in Literacy and Numeracy in Primary Schools was commissioned to look at the attitudes of primary head teachers towards the issues surrounding raising standards in literacy and numeracy. The report also considers the general view of head teachers to ICT and the role it has to play in the areas of literacy and numeracy.

The report was commissioned during a period of significant change in UK education with the government pledging new funds and setting new targets in core skills. One of the government's major initiatives, the National Grid for Learning, has already started to make an impact, with more and more primary schools gaining access to computers, the Internet and to the wide range of resources this access provides.

At the time this research was carried out the National Literacy Framework, with its much talked about Literacy Hour, was already in place in a small proportion of schools, and the Numeracy Framework was on the horizon. Although neither of the frameworks specifically cover the use of ICT in teaching and learning, a small number of teachers are already making some use of computers in the classroom for the teaching of core skills. Guidelines are being worked on by the Numeracy and Literacy Task Forces, that aim to help all teachers to use ICT effectively in the literacy and numeracy hours.

RM has been involved in educational ICT for over 25 years and supplies UK schools with the most popular primary classroom solution; the RM Window Box. From anecdotal feedback on the use of the Window Box and other ICT solutions in the classroom, many teachers say that they believe that technology has a role to play in helping to deliver the new curriculum effectively; in actively supporting best practice and in the raising of standards. The report explores the extent to which this belief is widespread.

I believe the findings of this report demonstrate that there is a real sense that ICT can play a key role in the raising of standards in core skills. The findings highlight a gap between this perception and the actual implementation of technology to address these issues in the classroom today. This in turn reinforces the claims made by the teaching profession over a number of years, that there needs to be comprehensive training in the use of ICT in the classroom to improve teachers' confidence and competence. The newly announced NOF Teacher Training Initiative will go a long way to closing these gaps and I believe will put UK education in a position where technology really can transform teaching and learning.

EXECUTIVE SUMMARY

The main findings of **The RM Report on Computers in Literacy and Numeracy in Primary Schools** shows that head teachers see a real role for ICT in improving standards in literacy and numeracy. Other key findings to emerge are:

- On average smaller schools are more likely to be confident of meeting their targets than larger schools.
- There is an overwhelming agreement that in order to raise standards more resources are needed.
- Technology resources are seen as key to raising standards and are placed as a higher priority than paper-based resources.
- Two-thirds of respondents believed that the added flexibility they would gain from the reduced requirements for non-core subjects would help raise standards in literacy and numeracy.
- Low staff confidence was reported to be a significant barrier in raising standards in literacy and numeracy. 90% of heads thought that their staff would benefit from more training in the specific skills of teaching literacy and numeracy.
- Staff confidence is also seen to be an issue in the context of ICT.
- The respondents' belief in the potential for ICT to make a difference in raising standards highlights the need for training in ICT.
- 91% believe that ICT could help raise standards.
- More than three-quarters (78%) felt that this potential applied equally to literacy and numeracy.
- Nearly three-quarters of primary head teachers expressed interest in Integrated Learning Systems.

These findings support initiatives such as the NOF Teacher Training Scheme which is designed to help teachers in the use of ICT in the classroom. They also point to the potential of specific curriculum ICT resources such as Integrated Learning Systems in the primary environment.

AIMS AND METHODOLOGY

During the summer of 1998, RM conducted research among primary school head teachers into the issues surrounding raising standards in literacy and numeracy. The principal objective was to understand how head teachers felt about the new literacy and numeracy strategies, and to determine whether they thought ICT would have a significant role in helping to raise standards.

To this end, the survey aimed to:

- Discover whether head teachers felt confident that their schools would achieve their numeracy and literacy targets.
- Identify the main requirements for schools to be able to raise standards.
- Examine attitudes to recent changes in the National Curriculum.
- Evaluate perceptions and attitudes towards the potential role of ICT.

Questionnaires were completed by 2,135 primary schools across England and Wales. Local Education Authority (LEA) schools made up 87% of the sample, with the remainder being Grant Maintained, Independent and Special schools. Most schools (94%) were from England, with 6% of respondents from Wales.

Many of the computer packages that aim to address the literacy and numeracy requirements rely on the availability of multimedia computers. The research data showed that the average number of pupils per multimedia computer was 48. In addition, only 27% of schools had six or more multimedia computers, 49% had between one and three multimedia computers and 6% had none at all. Since the original research was carried out, however, more schools will have improved their multimedia capability as a result of National Grid for Learning funding. We can, therefore, expect this picture to continue to change over the next few years as the NGfL roll-out continues.

At the time of our survey, schools were preparing to implement the Literacy Hour. Some (21%) had already implemented it (with over half of them reporting some difficulty) and a further 61% expected to have implemented it by September 1998.

REPORT FINDINGS

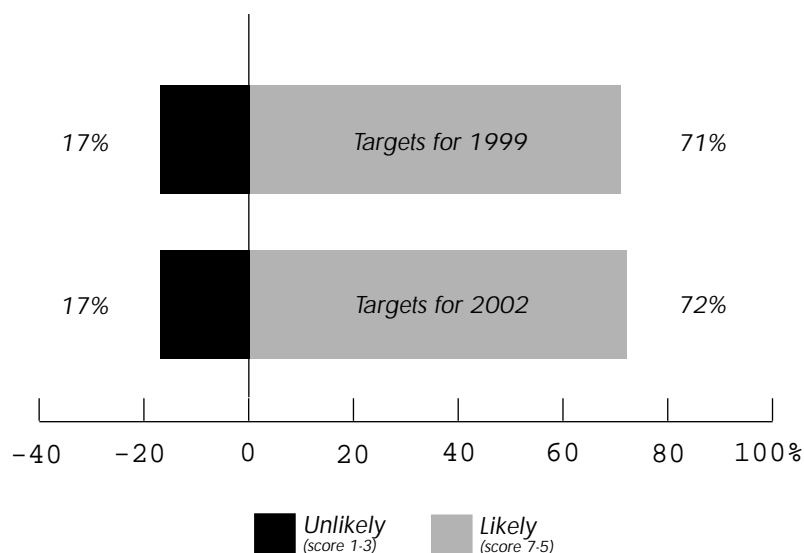
Meeting the new Government targets

There was a broadly positive response to the new targets for literacy and numeracy. Nearly three-quarters of the sample (71%) were confident that their school would achieve its literacy and numeracy targets, both for 1999 and 2002.

However, 17% of schools felt they would be unlikely to meet their targets for 1999. Of these, 64% did not expect to meet the targets set for 2002 either.

Ratings of likelihood of school achieving Literacy & Numeracy targets

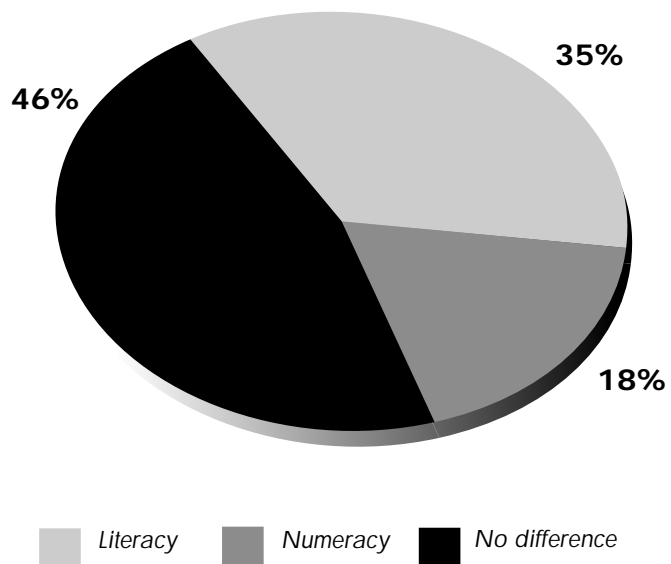
(Scale 7 = Very likely to 1 = Very unlikely)



Examination of the data showed that on average, smaller schools were more likely to be confident of meeting their targets than larger schools. Unsurprisingly, schools with high proportions of SEN pupils and/or in low socio-economic catchment areas (defined by the number of pupils receiving free school meals) were less likely to feel confident of meeting their targets. The proportion of pupils in the school with English as an Additional Language (EAL) was not a major factor affecting a school's confidence to meet its targets.

For some schools, there was a marked difference between their confidence in meeting the targets for literacy compared to numeracy. More than a third of schools (35%) expected to find their new literacy targets harder to meet, whilst almost one in five (18%) anticipated more difficulties in meeting their numeracy targets. Demographic analysis indicated that the higher the proportion of SEN pupils and/or the lower the socio-economic area, the more problems the school anticipated in meeting its targets for literacy.

Which target is more difficult to meet?

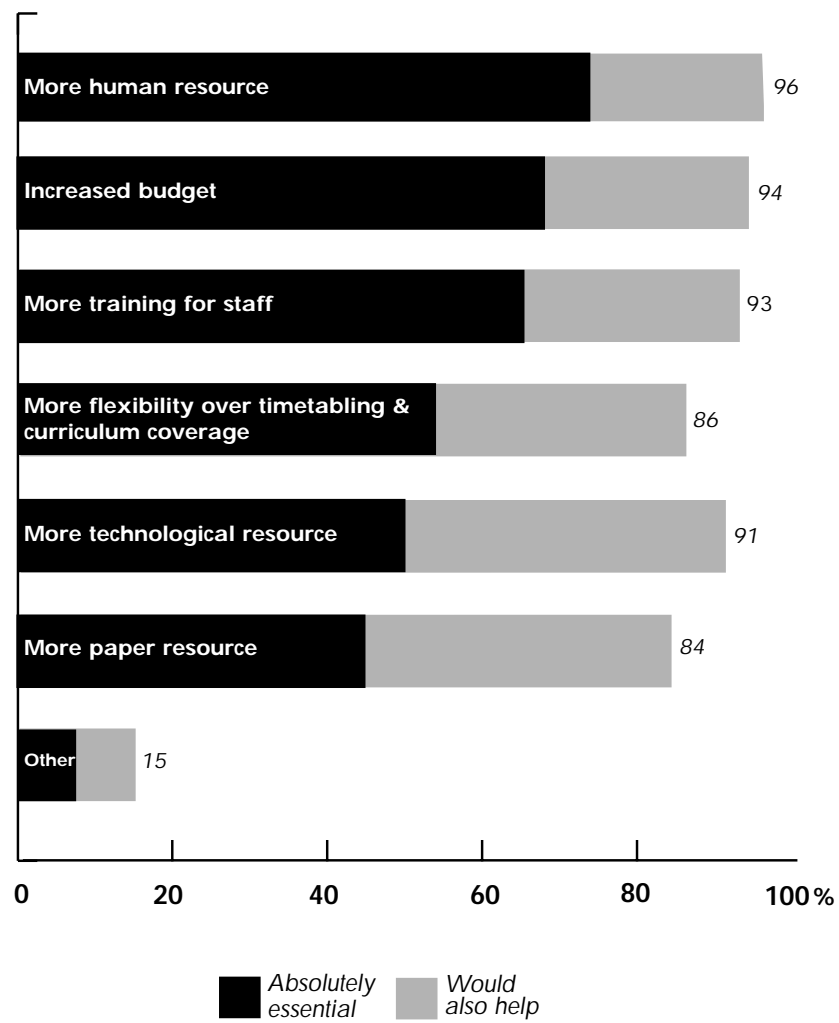


Raising standards: need for more resources

There was overwhelming agreement that in order to raise standards, more resources are needed. The most important resources were considered to be human resources, viewed as essential to raising standards by almost three-quarters (72%) of the sample. Increased funds and training for staff were also high on the priority list; nearly every school had a need for these and almost two-thirds (62%) considered them essential. Initiatives, such as the lottery-funded (NOF) teacher training in the use of ICT and the money provided through the National Grid for Learning, are beginning to address these needs where ICT plays its role in raising standards.

In fact, technology resources were seen as key to raising standards and were placed as a higher priority than paper-based resources. The vast majority of the sample (91%) expressed a need for more ICT resources. Significantly, whilst 42% considered ICT essential for raising standards, only 36% considered more paper resources to be essential.

Main things schools need to be able to raise standards



Raising standards: impact of National Curriculum changes and the Literacy and Numeracy hours

The respondents were generally quite positive about the changes in requirements for National Curriculum coverage. Nearly two-thirds of the sample (64%) believed that the added flexibility they would gain from the reduced requirements for non-core subjects would help to raise standards in literacy and numeracy. Indeed, almost half of the schools surveyed considered greater flexibility over timetabling and curriculum coverage as essential to raising standards. In addition, more than three-quarters (78%) believed that the new numeracy and literacy hours would definitely or probably help to raise standards.

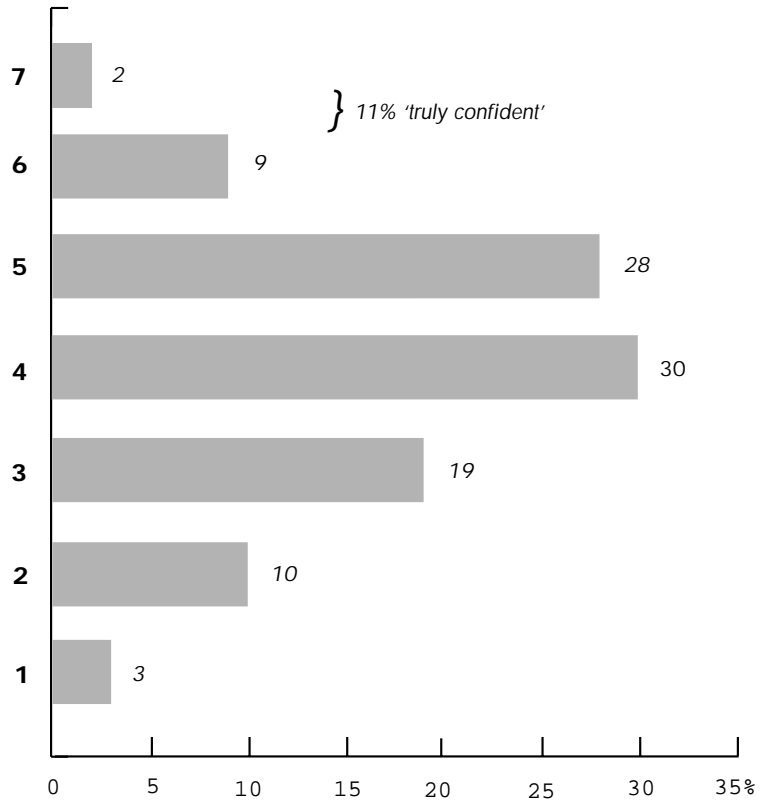
Raising standards: teacher confidence

Low staff confidence was found to be a significant barrier to raising standards in literacy and numeracy. Only half (50%) of the head teachers that responded rated their staff as 'truly confident' in teaching literacy, and significantly less (42%) rated their staff 'truly confident' in teaching numeracy.

In the light of these figures it is perhaps not surprising that over 90% of heads felt that their staff would benefit from more training in the specific skills of teaching both numeracy and literacy.

Staff confidence was also considered to be an issue in the context of ICT. Only 11% of respondents considered their staff 'truly confident' in using ICT in their teaching. It is in this area that the lottery-funded (NOF) teacher training will have such a huge role to play.

Ratings of staff confidence in using ICT in their teaching
(Scale 7 = Very confident to 1 = Not at all confident)



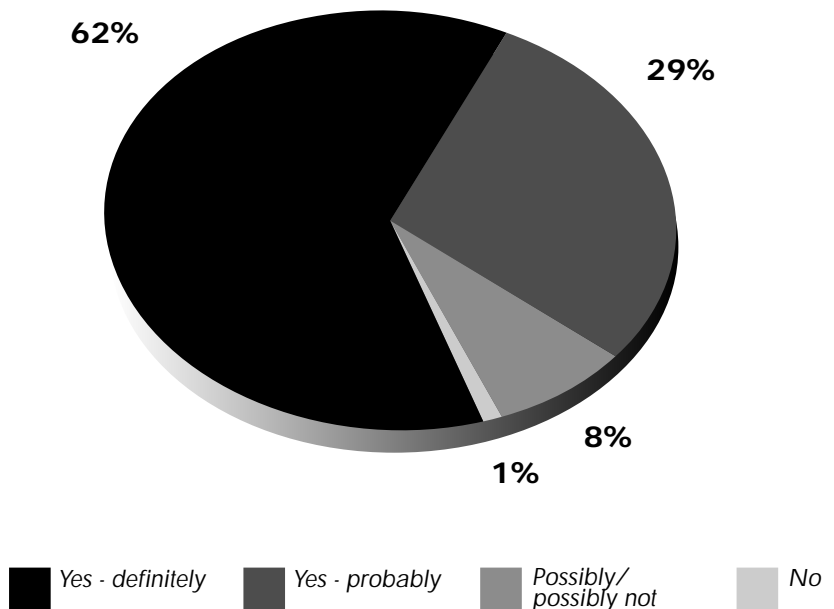
The contribution of ICT today

At present, only 11% claimed that ICT was making a significant contribution to raising standards of literacy in their school. Even fewer (6%) felt that ICT was making a significant contribution to raising standards of numeracy. However, these findings are startlingly at odds with the respondents' belief in the potential for ICT to make a difference. Lack of confidence in teaching literacy and numeracy, combined with a similar lack of confidence in using ICT in their teaching, may somewhat explain respondents' views about the contribution that ICT is currently making to literacy and numeracy. The results highlight once more the pressing need for extra resources and for teachers to receive training in how ICT can be harnessed to deliver improvements in numeracy and literacy.

The potential of ICT to raise standards

The respondents were asked 'Do you believe that ICT has a role to play in helping to raise standards of numeracy and literacy in primary education?'. Their responses were unequivocal. Almost all (91%) stated that they believed it could help to raise standards, with 62% of all respondents stating that it 'definitely' has a role to play.

Do you believe that ICT has a role to play in helping to raise standards of literacy & numeracy in Primary Education?



The potential seen for ICT was broad. More than three-quarters (78%) felt that this potential applied equally to literacy and numeracy. Among the 22% who saw a difference, slightly more (14%) saw more potential for literacy than for numeracy (8%). Most respondents (73%) also saw the potential across the whole school, with the main targets for additional computer-based support for numeracy and literacy being all primary age children.

Particular interest was shown in Integrated Learning Systems that gave immediate feedback to pupils and the opportunity for continuous assessment and monitoring. Nearly three-quarters of primary head teachers said they would be interested in using such packages in their school.

Additional research carried out by RM indicates that the main packages currently being used in the primary classroom are word processors and CD-ROMs, followed by painting packages. Spreadsheets and databases are being used to a much lesser degree. What schools still lack at present is specific guidance on how to fully utilise all, not just a percentage of, the resources available to them in a way that really will enhance the teaching of numeracy and literacy.

KEY CONCLUSIONS

The results of the survey were not altogether surprising. Perhaps what is surprising is the extent of the gap that exists between current and potential practice. On the one hand, the survey saw head teachers expressing a very positive view of the potential of ICT to raise standards, yet on the other hand, it was clear that for the majority the current role of technology in numeracy and literacy teaching was extremely limited.

The overwhelming evidence is that the vast majority of primary school head teachers do believe that ICT has an important role to play in teaching both literacy and numeracy. Most feel that there is as much need for ICT resources identifying this as a higher priority than traditional paper-based resources. A significant proportion claimed that ICT resources were essential.

The survey highlighted the need for training in how to effectively teach literacy and numeracy, both using traditional methods and through the medium of ICT. Head teachers felt that their staff confidence was extremely low, particularly in the use of ICT.

The lottery-funded teacher training beginning in April 1999 is designed to address many of the ICT issues surrounding literacy and numeracy and the confidence of teachers to use it. Working through commercial training providers, such as the Learning Schools Programme (a partnership between the Open University and RM), the Teacher Training Agency aims to train half a million serving teachers and school librarians in the UK on when, when not and how to use ICT in teaching in the curriculum.

The training is designed to bring all serving teachers and school librarians up to the standard of newly qualified teachers entering the profession from 1999. It should make a significant difference in closing the gap between the expectation of the learning gains ICT can deliver and the current reality.

RM plc
New Mill House
183 Milton Park
Abingdon
Oxfordshire
OX14 4SE
Telephone : 01235 826000
Fax : 01235 826999
Internet : <http://www.rm.com>



RM plc
New Mill House
183 Milton Park
Abingdon
Oxfordshire OX14 4SE

Telephone: 01235 826000
Fax: 01235 826999
Internet: <http://www.rm.com>

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