Research Notes

SPRING 2004

The Role of Technology in Early Childhood Program Administration:
Results of the 2004 Directors' Technology Survey

One of the most important issues facing early childhood administrators is how to effectively integrate technology into the management operations of their centers. In an effort to provide up-to-date data on the role of technology in program administration, the Center for Early Childhood Leadership recently conducted a study of 364 center-based early childhood directors from 18 states and the District of Columbia. Data from the 2004 survey were compared to results from previous studies conducted on the same topic in 1997 and 2000.

Sample

The respondents who completed the two-page technology survey work at centers that reflect the broad diversity of the early childhood field—for-profit and nonprofit programs, part-day and full-day programs, Head Start, and faith-based programs. One-third of the directors' centers (34%) are accredited by the National Association for the Education of Young Children (NAEYC) or another professional organization.

A majority of the respondents (82%) have at least a baccalaureate degree and 36% of the sample has gone on to achieve a master's degree or another advanced degree. The educational level of respondents in this study is thus somewhat higher than the general education level of directors in the early childhood field where overall 70 - 75% of directors have a baccalaureate degree. It is possible that early childhood administrators who have higher levels of education are those more familiar with technology are thus more likely to participate in a study such as this.

Directors' Use of Computers

Two-thirds of the directors (67%) indicate they have a computer that is adequate for their present needs; 29% express an interest in upgrading their hardware and/or software; and 4% of respondents do not presently have a computer but hope to acquire one in the near future. These percentages mirror the results from the 2000 study. Ninety-five percent of directors state they use their computer for personal or professional purposes on a daily or weekly basis; 5% never use a computer or only use it monthly.

Directors' use of the Internet and e-mail has increased considerably from 1997 to 2004. In 1997 less than 10% of directors indicated they used the Internet and e-mail on a daily or weekly basis. In 2004, 85% of directors indicate they use the Internet and e-mail on a daily or weekly basis. The remaining 15% either never use the Internet or e-mail or do so only on a monthly basis.

Directors' Use of Software

The survey asked directors to indicate their level of skill in six software applications: word processing, desktop publishing, spreadsheets, presentation graphics, database management, and personal information management. Almost three-fourths of the directors (73%) indicate they feel competent using word processing applications. Less than one-third of the directors, however, indicate that they feel competent in using any of the other five software applications. For example, almost three-fourths of directors state they have no skill or very limited skill in using database management applications. More than half the sample responded similarly regarding their skill level in using desktop publishing, spreadsheets, presentation graphics, and personal information management applications.

Directors were also asked to rate the degree to which different administrative tasks are computerized at their center. In 2000, two-thirds of directors (68%) indicated that the administrative tasks that could be completed with word processing applications were the ones most likely to be computerized at their centers. Tasks needing to be completed with database management applications were reported to be the least computerized (40%). These findings have changed very little in 2004. The table on the following page summarizes the percentage of directors who indicate they rely on the use of a computer to complete different administrative tasks.

Administrative Tasks	Percentage
Newsletters, flyers, brochures	84
Memos, letters, reports	68
General ledger, payroll, budget and enrollment forecasting	67
Child and staff data management	44
Mailing labels, envelopes	39

Percentage of Respondents Using Computer Technology to Complete Different Administrative Tasks (N = 364)
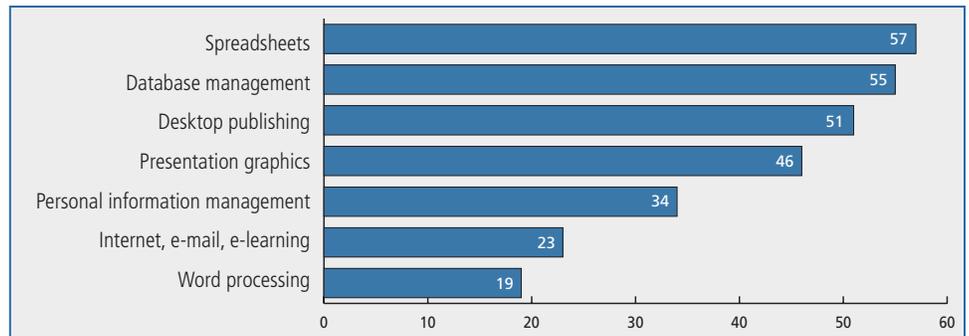
Differences Between Accredited and Nonaccredited Programs

An additional analysis of the data was conducted to discern if there were statistically significant differences in the use of technology in accredited programs compared to those that were not accredited. Directors of accredited programs consistently rated higher than directors of nonaccredited programs in their use of the Internet and e-mail, in their perceived level of skill in using different software applications, and in the degree to which different administrative tasks were computerized at their centers. In the degree to which administrative tasks were computerized at their centers, these differences were statistically significant (p < .01).

Directors' Technology Needs

Of the 364 directors who participated in this study, more than half (54%) indicate a need for additional training and for donations of software (58%). To a lesser degree, directors also indicate a need for donations of hardware (45%) and technical assistance (41%). Directors' overall need for support in 2004 is nearly as great as it was in 2000 when 58% indicated a need for additional training. The following graph summarizes the percentage of directors who are interested in different types of training.

Training Topics That Directors Indicate Would be Beneficial (N = 364)

Bar chart — percentage of directors interested in each training topic:
- Spreadsheets: 57
- Database management: 55
- Desktop publishing: 51
- Presentation graphics: 46
- Personal information management: 34
- Internet, e-mail, e-learning: 23
- Word processing: 19

Implications for Policy and Practice

The results of this study confirm that while directors' use of the Internet and e-mail has increased substantially over the past seven years, their skill level in using software applications other than word processing is still limited. Directors would still benefit by additional training, particularly in software applications such as spreadsheets or data management. Given that the sample for this study was more highly educated than the general population of center directors, the need for training and technical assistance may even be greater than reported in this study.

For more information about research conducted by the Center for Early Childhood Leadership, call (800) 443-5522, ext. 5055 or visit the Center's Web site at www.nl.edu/cecl. Funding for the Center's Research Notes is provided by the Illinois Department of Human Services and the McCormick Tribune Foundation.

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