

Technology and the Changing Campus Workforce

By Gary Rhoades

New information and instructional technologies promise to substantially restructure the campus workforce.

Information technologies augur a shift in the balance between clerical and professional/technical employees, decreasing the numbers of the clerical and increasing the numbers of professional/technical.

New instructional technologies also augur a shift in the balance between full- and part-time faculty, and between faculty and support professionals, decreasing the proportionate numbers of full-time faculty and increasing the proportions of part-time faculty and support staff.¹

The implications of these changes for higher education unions are profound. For one thing, the union representation rate for white-collar educational support personnel is relatively high for clerical (37.2 percent) but relatively low for professional/technical staff (14.8 percent).

Similarly, the union representation rate is relatively high for full-time faculty (32 percent) but low for part-time faculty (10 percent) and support professionals (14.8 percent).²

The restructuring of the campus workforce, then, threatens to reduce the union representation of campus employees. At the same time, this restructuring presents new organizing opportunities for higher education unions. In either case, restructuring raises important questions about how technology issues are treated in collective bargaining agreements.

To what extent is technology addressed in higher ed staff and faculty union contracts? What information and instructional technology issues do these contracts address? To what extent do contracts speak to workforce restructuring? These questions frame my analysis of 480 staff and faculty bargaining agreements.

What's at stake in the introduc-

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Higher education faculty and staff are increasingly managed professionals and managed employees.

tion of new technologies into workplaces? Most dramatically, and most obviously, jobs are at stake. The private sector's history is one of replacing people with new technologies—eliminating, downsizing, or restructuring employment.³

It appears higher education is no different than the private sector in this regard. When higher education institutions were making personnel cuts, the two job categories that declined were clerical workers and service workers.

The trend in faculty positions is not of faculty being directly replaced by technology (not yet, anyway), but of full-time faculty declining as a proportion of the campus professional workforce.

The proportion of full-time faculty positions has shifted substantially: from about 78 percent of the senior instructional workforce in 1970 to about 54 percent in 1994.

Moreover, the faculty's share of professional positions on campus has declined: from about 64 percent in 1977 to about 55 percent in 1989, and falling.

The growth areas in professional employment on campus are among part-time faculty and support professionals. And it is such personnel who are the primary users of instructional technology.⁴

Of course, more is at stake than job protection. New technologies

require new skills. To what extent, on whose time, and at whose expense is training to acquire those skills available?

The literature on unions and training in private industry calls into question the extent to which contracts afford bargaining unit members training opportunities.⁵ But most such work concentrates on blue-collar workers, not on knowledge workers.⁶

In either case, shouldn't jobs that require greater skills pay more than less skilled jobs? In practice, are employees' positions upgraded according to their skills, and are employees paid commensurate with their new skills? Again, much of the literature on private sector industrial relations questions the extent to which new technologies "enskill" workers and enhance their position.

Other dimensions of employee-working conditions impacted by technology include autonomy, control over work product, and safety.

With new technologies come new opportunities for "algorithmic" control by supervisors and monitoring of employees.⁷ Keystrokes can be counted. Communication can be tracked and accessed. Performance at a desk or in a classroom can be taped and observed. Higher ed faculty and staff are increasingly "managed professionals" and managed employees.⁸ To what extent do

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contracts protect employees against the use of technology to increase managerial oversight?

New technologies raise questions about ownership and control of intellectual property. In this area, the use of instructional technology may enhance institutions' ownership claims vis-a-vis faculty's teaching activity and course material.

To what extent do contract provisions address such ownership and use issues? Finally, new technologies may pose health and safety issues in the workplace. To what extent are matters of safety in new "production processes" addressed in collective bargaining agreements? Such questions inform my analysis of faculty and staff contracts.

The data for this study are the collective bargaining agreements found in the National Education Association's Higher Education Contract Analysis System (HECAS). This database includes contracts negotiated by over 14 unions representing education support personnel and by the three major national faculty unions (American Association of University Professors—AAUP, American Federation of Teachers—AFT, and the NEA).

The database also contains contracts negotiated by independent bargaining agents for faculty. The sample overrepresents NEA con-

tracts and underrepresents contracts negotiated by AAUP and AFT locals.

The 1996-97 version of HECAS used for this article includes 149 education support personnel, or ESP, contracts (113 at two-year and 36 at four-year institutions) and 331 faculty contracts (261 at two-year colleges and 70 at four-year institutions).⁹

In analyzing the ESP contracts, I focused first on the incidence of technology provisions in the contracts. I then coded these provisions into categories generated from the literature and guided by the structure of the provisions themselves.

I further identified types of provisions within these categories: for example, layoff provisions include clauses that prohibit displacement of current bargaining unit and clauses that address the effects of displacement.

Finally, I considered the extent to which the contract provisions speak to workforce configuration issues, including management's ability to reclassify positions.

My analysis of faculty contracts followed much the same pattern. I focused first on the overall incidence of provisions. I then coded the provisions into various categories generated from my previous analysis of technology issues in faculty contracts (based on a 1994 version of HECAS).¹⁰

To what extent are technology issues addressed in bargaining agreements for support staff? Not much.

I further examined types of provisions within the categories. Finally, I considered the extent to which the contract provisions speak to workforce configuration issues, including management's ability to reclassify positions.¹¹

To what extent are technology issues addressed in collective bargaining agreements for ESP? Not much. Only 33 contracts, a little more than one-fifth of the 149 ESP contracts, have provisions on technology.

What types of issues about information and instructional technology do these contracts address? Nine different issues are addressed by contracts. Yet, only two sorts of provisions (training, found in 13 contracts, and management rights, found in 12 contracts) turn up in more than seven contracts. Most contracts address only one or two issues.

The 13 training provisions vary considerably. In five cases, the provision for training is part of a layoff clause. In other words, bargaining unit members about to be laid off due to changes in technology are given some provision for training, in lieu of layoff.

But three of these provisions leave discretion to managers and fail to ensure that employees will not lose their jobs.

One contract includes a sidebar letter prohibiting layoffs during the

life of the contract, but the contract allows for managerial discretion with a provision that deems employers' decisions about training and employees' fitness to be final.

Only the Los Angeles Community College System has a provision that flatly prohibits layoff. It also ensures training will be paid for by the District, on release time.

No employee shall be laid off or demoted as a consequence of the introduction of microelectronic technology (hardware or software); employees shall be required to participate in training on such technology as directed by the District to obtain or maintain an acceptable level of proficiency in the new technology. To the extent possible, affected employees shall be involved in the selection and implementation of technological changes. (Los Angeles Community College System, Article 8.J.9.a)

Four training provisions call for the employer to pay for training or for the training to be done on paid time. In some clauses the district requires the training; in others, the employee must initiate the request for training.

Four other contract provisions discuss training in the context of

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professional development. Two refer to programs. Two others refer to leaves that employees may take to get training. In one case, it is a paid professional leave; in the other case, it is leave without pay.

The second most common provision on technology speaks to management rights. In nine contracts, the provision is a general statement of management rights on "automation," "utilization of technology," and "technological change." In the three other contracts, the reference is to technological change as a justification for reorganization.

As noted earlier, only one contract has a provision prohibiting the layoff of bargaining unit employees due to technological change. One other contract has a sidebar letter prohibiting layoffs during the life of the contract.

Five other provisions speak to layoff: three clauses indicate the possibility of training for affected employees; two others simply identify technological change as a justification for layoffs. The protection of bargaining unit employees' jobs is the exception, not the rule.

Another issue addressed by a few contracts is safety. Of the four safety provisions, three involve a committee with union representation. These committees discuss health and safety matters or develop guidelines for purchasing equipment. Two of the clauses focus

exclusively on safety matters surrounding video display terminals. The other two encompass broader safety issues, speaking to OSHA regulations and a variety of safety issues.

A final issue of importance is the workforce's configuration. To what extent do contractual clauses speak to workforce restructuring, addressing the number of bargaining unit positions? To a very limited extent. Again, the exceptional case is the Los Angeles Community College System's contract. It has a short, simple clause protecting bargaining unit positions.

Current bargaining unit work or new bargaining unit work which results from new or changing technology shall remain the work of the bargaining unit. (Los Angeles Community College System, Article 8.J.9.c)

By contrast, two other contracts accord employers the right to reclassify, perhaps in ways that move positions out of the bargaining unit.

What about faculty? Do they do any better in tackling technology issues in their collective bargaining agreements? More so than in ESP contracts, but less so than one might hope.

Most of the technology provisions in faculty contracts don't cover a wide range of possibilities.

Of 331 faculty contracts in the 1996-97 version of HECAS, nearly half (46 percent) have provisions on technology. One might hope that a larger proportion of faculty contracts had clauses, but these numbers represent a greater level of incidence than was found in the 1994 HECAS database of 212 faculty contracts, where 37 percent had provisions on technology.¹²

What types of information and instructional technology issues are addressed? Are the range of issues and emphasis different from those found in the 1994 database?

I coded 19 different types of provisions. Only one type—addressing calculation of load credit and class size for courses using new technology—appears in close to a third of the 153 contracts that have technology provisions.

Only two other types—pay (37 clauses) and intellectual property (33 clauses)—appear in more than a fifth of the contracts with technology provisions. As with the ESP contracts, most of the technology provisions in faculty contracts don't cover many possibilities.

As would be expected, the clauses in the 1996-97 database cover all of the types of provisions found in the 1994 database. Moreover, the emphasis on the various types of provision is much the

same, with some variation.

The two most common types of provisions in both databases address pay and intellectual property. The next four most common types of provision are course scheduling (the process of scheduling, and whether the use of technology is voluntary), displacement (layoff), new duties (additional office hours, for example), and the decision to use new instructional technology.

Besides these categories, I identified and coded some new categories in the 1996-97 database. Among the most important: 11 contracts provide for the future study or negotiation of issues surrounding the use of instructional technology.

In addition, 10 contracts either call for evaluation of the instructional technology initiatives or speak to workforce configuration (the number of positions within the bargaining unit affected by instructional technology).

Such matters mark a broadened awareness of the potential impact of instructional technology on the structure of the workforce, as I discuss below.

To what extent do contractual clauses speak to workforce restructuring? In only the exceptional cases. Contracts with 19 institutions address workforce matters through clauses about the decision to use instructional technology, the

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evaluation of that technology, or the number of positions in the bargaining unit.

The contracts of 17 institutions have some provision addressing the decision to use instructional technology, either generally, or in the case of specific courses.

For the most part, such clauses call for consultation or negotiation with the union, or review by a committee consisting of faculty, before instructional technology will be used to deliver courses.

The strength of these clauses is that they establish the faculty right to be involved in decisions about technologically delivered curricula. Their weakness is that they address curricula, not positions, and that, by and large, most of them involve faculty input, not control. For an exception on the latter point, see the following.

Televised courses shall be offered under or through the auspices of the College only after prior adequate negotiation with the Union, with a good faith intent to reach agreement on such issues as wages, hours, and terms and conditions of employment. (Henry Ford Community College, Article 11.C)

Another source of faculty control is faculty review within the appropriate academic unit.

No credit-bearing courses taught by non-traditional methods (television, computer-aided instruction, videotape lecture, or any other electronic or other media) will be offered without the approval of the department members involved in teaching in that subject area in consultation with the Department Chair. (Jackson Community College, Article 5.L.1)

As is evident in the phrase, "credit-bearing courses," some of the contracts address only certain parts of the curricula—whether in existing courses, courses offered in the morning, courses for credit, or whatever. This leaves a considerable amount of open terrain for the administration to exploit without review by bargaining unit faculty.

A smaller number of contracts (seven) have provisions that call for the evaluation of instructional technology. On the one hand, this can represent a significant dimension of faculty control over the use of instructional technology, for the clauses involve monitoring quality, access, and budget.

The charge of the Telecourse Committee is to promote the development of new telecourses, to monitor the academic quality of telecourses, and to make recommendations to the Dean of

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Liberal Arts and Sciences. (South Suburban College, Article 6.2.A)

The purpose and objectives of the [Faculty Workload] Committee will be to evaluate the implementation of Article 20 on faculty workload at CSU institutions, and make recommendations to mitigate negative consequences, if any, of this workload policy, evaluate and make recommendations on innovations in the delivery of education services that will increase student access to the CSU while maintaining high academic standards, evaluate and make recommendations on forms of professional development for faculty designed to support the objectives stated (California State University, Article 21)

On the other hand, there is little in the way of teeth in some of the evaluation clauses. If the evaluation is poor, what happens? Can the faculty decide that the investment in instructional technology be discontinued? No. The language of the Pennsylvania College of Technology contract is an exception:

Evaluation of instructional productivity initiatives will follow initial one-year piloting with joint review by college and appropriate full-time Depart-

ment/Division Employees. A primary focus of evaluation will be the issue of educational quality and opportunity for students. Mutual agreement by the parties is required following the evaluation and prior to extending said initiative.

A third type of workforce provision speaks directly to the issue of bargaining unit positions. Only 1 of the 331 contracts in HECAS has such a clause.

Under no circumstances will audio or videotapes or computer programs be used to reduce the number of teaching positions existing at the College in May, 1988, exclusive of any one-semester only contracts ...” (Middlesex County College, Article 3.F)

Of course, some of the provisions discussed earlier limit the use of instructional technology. Presumably, one aim of such clauses is to prevent the reduction of bargaining unit positions by minimizing the expanded use of instructional technology. But such clauses are few in number.

I address ESP and faculty contracts in the same article because the workforce restructuring currently taking place on campuses cuts across traditional job categories.

Educational support personnel are less protected contractually than faculty on technology-related issues.

The membership of both ESP and faculty locals is threatened by a similar phenomenon—the growth of professional/technical employees who are more likely to fall outside bargaining units.

The development of new information and instructional technologies is increasing the numbers of these professional/technical employees and decreasing, in relative terms, new clerical and full-time faculty positions. Such a shift calls for concerted and joint action by ESP and faculty bargaining units to protect current employees and to ensure that new professional/technical positions are either included in existing bargaining units or organized into new units.

Educational support personnel are less protected contractually than faculty on technology. About one-fifth of ESP contracts have technology provisions, compared to nearly half of faculty contracts. And the clauses that do exist provide fewer protections and opportunities for support staff than for faculty.

The technology that impacts support personnel may be different from the technology that impacts faculty, but the nature of the threat is in many ways the same. Both sets of employees must be concerned about working conditions, training, and displacement of current bargaining unit members.

In neither case do half of the

contracts address technology issues. In neither case do even one-tenth of the contracts provide for training or support in the use of new technologies. In neither case do more than 6 percent of the contracts address the displacement of bargaining unit members by technology.

Obviously, there is much room for improvement in negotiating protections for current staff and faculty on new information and instructional technologies. For unions this is certainly a first line of defense. There are, fortunately, some excellent examples of good language in contract provisions.

But I would recommend a second line of action for contract negotiators. More is at stake than the jobs of current bargaining unit members. What is at stake is bargaining unit positions. Consequently, there is a need for provisions that address the configuration of the workforce.

Only a few examples of language for protecting the number of full-time faculty positions exist—and only one example of useful language for support personnel.

Finally, union negotiators must move beyond protectionism. To focus solely on protecting current workers and existing positions is to overlook the changing nature of

work and the changing structure of the campus workforce.

Higher ed faculty and staff unions must work to ensure that newly created professional/technical positions are either included in existing bargaining units or organized into new units.

Higher education unions must also play a central role in implementing and evaluating the use of new technologies.

The new technologies are not going away. Unions must gain control over their use, by, in part, establishing evaluation mechanisms that assess the extent to which technologies deliver the ben-

efits claimed for them: increased efficiency, access, quality, and reduced costs.

In gathering such assessment data, higher education unions can move beyond being cast as self-interested resisters of change, to claim a central role in matters involving the public interest—the quality of, access to, and costs of educational services.

In doing so, faculty and staff can move from being "managed professionals" and managed personnel, to becoming employees who take an active role in the management of technology in their workplaces.¹³ ■

Endnotes

¹ The same point holds true with respect to contracting out practices, which threaten positions and restructure campus work. See Maitland and Rhoades, 1998.

² Maitland and Rhoades, 1998; Rhoades, 1996; 1998.

³ Garson, 1988; Vallas, 1993.

⁴ Montgomery and Lewis, 1995; Rhoades, 1998. In part, the pattern is one of converting positions (primarily staff, but also faculty) from one category to another, of positions being reclassified. I do not explore this in depth in this article, but it is a critical point, influenced by the civil service code, by classification/reclassification clauses in the contracts, and by management rights clauses. As one staff member indicated at a recent conference, "I've heard it called unit raiding, and other terms. I understand it. Management keeps doing this to us. They keep reclassifying bargaining unit positions as professional or supervisory, effectively transferring them out of the bargaining unit. We make all the arguments and make those arguments to the wall, but we keep losing. It's killing us." The complexity of the

issue demands full treatment in another article.

⁵ Kelley, 1990.

⁶ For an exception, see Rhoades, 1998.

⁷ Vallas, 1993.

⁸ Rhoades, 1998.

⁹ The 149 contracts are found at 118 different institutions because some institutions have more than one ESP contract.

¹⁰ Rhoades, 1998.

¹¹ See Maitland and Rhoades, forthcoming, for a discussion of technology issues in faculty contracts.

¹² Rhoades, 1998.

¹³ *Ibid.*

Works Cited

- Garson, B. *The Electronic Sweatshop: How Computers are Transforming the Office of the Future into the Factory of the Past*. New York: Simon and Schuster, 1988.
- Kelley, M. "New Process Technology, Job Design, and Work Organization: A Contingency Model." *American Sociological Review* 55 (1990): 191-208.
- Maitland, C, and G. Rhoades. "The Hid-

- den Campus Workforce: (De)Investing in Staff." in the NEA 1998 Almanac of Higher Education. Washington, D.C.: National Education Association, 1998: 109-18.
- Maitland, C., and G. Rhoades. "Bargaining Technology in Faculty Contracts." in the NEA 1999 Almanac of Higher Education. Washington, D.C.: National Education Association, forthcoming.
- Montgomery, D. C., and G. L. Lewis. "Administrative Staff: Salaries and Issues." in The NEA 1995 Almanac of Higher Education. Washington, D.C.: National Education Association, 1995: 109-26
- Rhoades, G. *Managed Professionals: Unionized Faculty and Restructuring Academic Labor*. Albany: State University of New York Press, 1998.
- Rhoades, G. "Reorganizing the Faculty Workforce for Flexibility: Part-Time Professional Labor." *The Journal of Higher Education* 67, no. 6: 626-59.
- Vallas, S. P. *Power in the Workplace: The Politics of Production at AT&T*. Albany: State University of New York Press, 1993.