



Reduce harmful work stressors.
Improve job quality and health.

Healthy Work **Strategies**

Job Redesign at a Sweets Manufacturing Company in England

This job redesign project was conducted by managers and workers, in consultation with University-based researchers, in one department of a privately owned, medium-sized, and partially-unionized sweets manufacturing company in England in the late 1970s. Problems of “low morale,” “poor shop-floor/management relations,” “low work motivation,” and “work apathy” were identified by both workers and management, and the department was regarded as the least desirable one to work in. These issues were described by the researchers through interviews with department employees and members of related departments such as personnel, engineering, work study and production planning, observing work in the department, and a questionnaire. Originally, the department of 35 employees was separated into:

- 1) Production (most employees) of about 40 different types of sweets.
- 2) Packing and quality control.

The whole department was run by one manager, with the help of supervisors for each section. Supervisors assigned people to tasks, set machine speeds (and thus the pace of the work), organized relief and breaks, monitored hygiene, safety and quality standards, maintained discipline and recorded data for management information systems.

Role of outside researchers

The researchers took an open participative approach, maintaining their independence. Either shop-floor or management could veto the project and the researchers' involvement in it; reports were freely available; the researchers accepted no fees, as both main parties were their 'clients'.

The “diagnosis” part of the project and the recommendations for change was mainly organized by the researchers in consultation with shop-floor workers, management and other departments. However, work redesign was under the control of a steering group, which represented all interested parties. Information was collected by interview, survey and existing records, and fed back both informally and through open reports. Therefore,

the definitions of the problem, suggested changes, the reasoning behind them, points of agreement and disagreement, the interests of separate groups, and all other aspects of the project were kept in public view.

Work redesign timeline

The work redesign project took 33 months total, in the following stages:

| Month | Stage | Salient events |
|-------|--------------------------------------|---|
| 1-2 | Contact and contract | Researchers' meetings with management and shop-floor workers to agree on a framework for project |
| 2-8 | Diagnosis | Observation of work in the department Questionnaires to obtain baseline information (month 5) Interviews Outline recommendations for work redesign |
| 8-15 | Work redesign | Setting up a steering group (month 8) Preparation for change (describing new roles, changing equipment layout) Implementation (month 15) |
| 15-21 | New work practices in the short-term | Working with the new system Questionnaires to assess short-term changes (month 21) |
| 21-33 | New work practices in the long-term | Researchers leave project (month 23) Supervisor position discontinued Researchers return with questionnaire to measure long-term changes (month 33) |

What was measured?

Work characteristics were measured by questions from the Job Diagnostic Survey on skill variety, work motivation, job satisfaction, task identity, task significance, autonomy, and feedback. Mental health was measured by 20 questions from Goldberg's General Health Questionnaire.

Diagnosis

Results of initial surveys, interviews, and observations revealed low levels of work motivation, general job satisfaction, and mental health among the shop-floor workers in this department (low in comparison to similar work groups in other research studies). In addition, there was discontent over low group autonomy (limited decision-making authority, or job control, by the work groups), group feedback, and "group work identity" (neither of the two work groups could see the production of the sweets from beginning to

end). Group autonomy was limited by existing managerial and supervising practices, not because of technical factors; feedback to the group was irregular, not directly relevant, and difficult to understand; and group-work identity was limited by the physical and functional separation into the production and packaging groups.

Carrying out the work redesign

The problem of group work identity was addressed by removing the physical barrier between the production and packing groups—by improved technology, by moving completed sweets through a cooling system and returning them to the main floor for quality control and packing, and by removing the two group leaders. Workers could now see the whole production process.

The problem of low group autonomy was dealt with by a major shift in responsibilities of the manager, supervisors, and work groups. The production and packing groups were each given control over how fast production moved, the distribution of jobs among team members, organization of breaks and change-over between different lines, and the distribution of overtime—all tasks that were previously under the control of the supervisor. The supervisor was kept out of day-to-day production decisions, and could intervene only if production targets were not regularly being met. Instead, the one remaining supervisor focused on improving support services, coordination of resources, and future planning. Eventually, the supervisor position was discontinued, with supervisory responsibilities falling to a single manager.

Finally, the steering group decided that the manager would be responsible for providing feedback to the work groups, feedback that was easily understandable and appropriate to the work.

Short-term and long-term impacts of work redesign

Group autonomy and group work identity were improved by the work redesign project both in the short-term and in the long-term. However, group feedback did not improve, likely due to the fact that changes in feedback were not clearly defined by the steering group.

Workers also reported short-term increases in work motivation, job satisfaction, job performance and mental health. At long-term follow-up over 33 months, even greater increases in job satisfaction and mental health were seen, and initial increases in work motivation and job performance were maintained.

In interviews, no workers indicated a desire to return to the old system. Workers reported feeling that the workplace atmosphere became more relaxed and less stressful. Conflicts within the department were greatly reduced, since workers had a better understanding of

and more control of the entire production and packing process. And, the department's productivity increased.

Conclusions

Improvements in work group decision-making authority and group identity among manufacturing workers appeared to lead to improvements in work motivation, job performance, job satisfaction and mental health. University-based researchers facilitated the process and conducted evaluation, but the changes in working conditions were planned and implemented by a steering group of workers and managers.

Technical note: Looking to measure the success of the program through comparison groups

The first comparison group consisted of all employees on the evening shift at the same department of the factory. For the first 12 months, the workers followed a traditional work organization, with employees having specific tasks and reporting to a supervisor and shift manager. After 12 months, at the request of the employees, the more autonomous job design was extended to the night shift. Workers in this group reported greater group autonomy after the switch to the new work structure, but did not report any significant changes in mental health.

The second comparison group represented the day shift at a different department in the same factory. The employees followed a traditional work organization, with employees having specific tasks and reporting to a supervisor and shift manager. No changes in group autonomy, job satisfaction, or mental health were seen over the time of the study. Compared to the original work redesign group, as well as the evening shift which switched to the autonomous group job design, the group autonomy, job satisfaction, and mental health were much lower in this second comparison group.

One limitation of the study was that the comparison groups are not completely the same as the group which had the work redesign, though they are still helpful for better understanding the changes seen due to the work redesign. The second comparison group was only followed up for 18 months, and was not assessed at the end of the study for long-term changes.

References:

1. Wall TD, Clegg CW. A Longitudinal Field Study of Group Work Redesign. *Journal of Occupational Behaviour* 1981;2(1):31-49.
2. Wall TD, Kemp, NJ, Jackson, PR, Clegg CW. Outcomes of Autonomous Workgroups: A Long-Term Field Experiment. *Academy of Management Journal*, 1986; 29(2):280-304.