

IMPLEMENTING SELF-DIRECTED WORK TEAMS AT A COLLEGE NEWSPAPER

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The problem: Motivating and retaining staff had become an ongoing problem at the student newspaper. Student staffers would quit abruptly when overwhelmed or dissatisfied, leaving the newspaper with critical positions vacant. This affected the performance of the newspaper. *Method:* The newspaper was organized into self directed work teams (SDWTs). Staffers completed measures of ambiguity tolerance, locus of control, and Big Five personality dimensions (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience). The newspaper editor (a student) and the staff advisor (who also works as a professional journalist) evaluated the performance of each staffer following the reorganization. Outcome variables were employee performance as measured by this evaluation, number of newspaper pages per issue, and advertising revenue dollars. *Results:* Following the reorganization, the paper saw an increase in page count and advertising dollars. Internal locus of control was the sole significant predictor of employee performance under the SDWT structure. Unexpectedly, neither conscientiousness nor agreeableness correlated with employee performance. *Conclusion:* Self-directed work teams can improve the performance of student organizations, but the SDWT structure is not right for everyone. Internal locus of control is the strongest predictor of individual performance under the SDWT structure.

Self directed work teams (SDWTs) have been used to improve manufacturing performance. In this study we describe the implementation of SDWTs at the student newspaper of a public university. The organization is over 40 years old and has a staff of around 30, including writers, editors, advertisers and graphic designers, all students. Motivating and retaining staff had been an ongoing issue. With no concrete consequences for quitting, student staffers could easily walk away when overwhelmed or dissatisfied, leaving the newspaper with important job functions vacant. This affected on the performance of the newspaper with regard to page count and advertising revenue.

In the Fall of 2010, the new editor, in consultation with faculty from the College of Business and Economics, set out to address the problem by reorganizing the newspaper into self directed work teams (SDWTs). The purpose of this was twofold: To improve the functioning of the student newspaper, and to engage in an applied management research project. Student clubs are an often untapped source of opportunity for student-led research (Norvilitis, 2000).

The editor divided the organization into teams for each distinct sector (News, A&E, Sports, Advertising) and provided each team with the resources to run as a separate body, making decisions from content to design to

staff hirings/firings. Measurable results were positive overall. There were, however, some implementation issues, including dissatisfaction and alienation on the part of some of the staffers. In this paper we describe the implementation of SDWTs at the student newspaper, and the positive and negative outcomes.

The authors of this study are the managing editor of the newspaper and a faculty member who was not directly involved in the reorganization.

Self-directed work teams

A self-directed work team is a group responsible for a complete product (M. Z. Hackman & Johnson, 1996; Kulisch & Banner, 1993) where members are responsible not only for executing the work but also for monitoring and managing their own work and interpersonal processes (J. R. Hackman, 1987). The use of self-directed teams in the workplace represents a departure from the classical management approach first popularized by mechanical engineer Frederick Winslow Taylor, who developed a systematic approach to management in the early 20th Century (Rosen, 1993). Taylor's work with the Ford Motor Company allowed him to establish scientific management in American industry (Taylor, 1911). In this system employees only have authority to complete a specific task set out by managers; the functions of workers and managers are kept separate (J. R. Hackman, 1986).

Sociotechnical Systems Theory (STS) emerged in the mid-20th century. While Taylorism focuses on the technical aspects of a job, STS takes into account both social relationships and work structure, considering them to be interrelated (Pearce & Ravlin, 1987; Trist & Bamforth, 1951). Designing work with both social and technical aspects in mind can result in lower turnover, absenteeism, fewer accidents, and increased output (Yang & Guy, 2004). Research in STS gave rise to the idea of Self Directed Work Teams

(SDWTs) (Neck, Manz, & Anand, 2000).

In an early use of SDWTs, Volvo successfully restructured their Kalmar Plant from flowline assembly to one group assembling an entire car (Lindholm & Norstedt, 1975). One of the first major US companies to implement SDWTs was Proctor and Gamble. The Lima, Ohio soap plant felt that their teams were so successful that they declared them trade secrets (Fisher, 2000). In the early 1980s, Xerox analyzed its customer service department and realized that small groups of four to seven interdependent workers could improve response time (J. R. Hackman, Wageman, Ruddy, & Ray, 2000).

Successful work teams

Working in groups or teams provides several advantages for both workers and the organization. Under the right conditions, groups make better decisions than individuals, and group decisions tend to achieve greater acceptance than individual decisions (Leavitt, 1975). To be successful, a work group or team must be of a manageable size (J. Richard Hackman & Vidmar, 1970; Steiner, 1972), have stable membership, and members with complementary skills and responsibilities (M. A. Campion, Medsker, & Higgs, 1993; Michael A. Campion, Papper, & Medsker, 1996; J. R. Hackman, 1987; Wageman, 2001). Rewards should go to the group or team, not to individuals (J. R. Hackman, 1987). Shared beliefs and moderately high cohesion contribute to successful outcomes (Yang & Guy, 2004). Because of positive findings such as these, the use of SDWTs has been increasing in recent years (Chaney & Lyden, 2000; Spreitzer, Cohen, & Ledford, 1999).

Individual variables

Because teams are comprised of individuals, a manager cannot build a successful team without taking into account the characteristics of the team's members. Previous research on a student newspaper in the United States indi-

cated that international students were among the best-performing employees, showing enthusiasm, English language proficiency, and personal responsibility (Stevenson & Mufuka, 2005). In the present study, non-U.S. students were not represented on the newspaper staff. The positive characteristics in evidence among the international students in the previous study, however, are consistent with our predictions of successful members of a student-run newspaper. Here we outline some of the most salient individual variables.

Personality

The five-factor model of personality has emerged from decades of personality research starting with McDougall's systematic effort to organize a taxonomy of personality (1932). Five stable dimensions consistently emerged (Borgatta, 1964; Norman, 1963). Research continues to confirm the robustness of the five personality dimensions-- extraversion, emotional stability, agreeableness, conscientiousness, and openness to experience--across different occupational categories (Barrick & Mount, 1991, 2004), theoretical frameworks (Goldberg, 1981), using different instruments (Conley, 1985; Costa & McCrae, 1985, 1988; McCrae & Costa, 1985, 1987, 1989), and with different cultures (Noller, Law, & Comrey, 1987). Of these dimensions, conscientiousness is arguably the most significant predictor of workplace performance (Barrick & Mount, 2004; Klehe & Anderson, 2007). Conscientiousness encompasses individual differences in planning, organizing, and executing tasks. Conscientiousness is positively related to the careful and thorough accomplishing of tasks on the job (Barrick & Mount, 1991). Individuals high in conscientiousness have a strong sense of purpose, obligation and persistence which helped them to perform better than those who were low in conscientiousness (Kirkman, Rosen, Gibson, Tesluk, & McPherson, 2002).

Locus of Control

An individual with an internal locus of control believes that his or her life outcomes are the result of internal factors such as hard work. Someone with an external locus of control believes that events are controlled by luck or other external phenomena. The first widely-used measure of locus of control was Rotter's (1966). Internal locus of control is associated with higher work performance (Linz & Semykina, 2009; McKnight & Wright, 2011; Spector et al., 2002) and higher average internal locus of control is associated with higher team performance (Boone, Van Olffen, & Van Witteloostuijn, 2005). The main disadvantage of the locus of control scale as developed by Rotter is its unidimensionality (Low & MacMillan, 1988). For this reason Paulhus's Spheres of Control Personal Control subscale (Paulhus, 1983) may be preferable to Rotter's measure for workplace research (Shaver & Scott, 1991). This scale has been revised several times and has been found to be reliable (Paulhus & Van Selst, 1990).

Hypotheses

The literature review on the effectiveness of SDWTs leads to Hypotheses 1a and 1b:

H1a: Performance: Overall, productivity as measured by page count will be higher under SDWTs

H1b: Performance: Overall, productivity as measured by advertising revenue will be higher under SDWTs

The literature on personality leads to Hypotheses 2a and 2b:

H2a: Individual performance: Conscientiousness will be positively related to being rated a high-performing employee within the SDWT structure.

H2: Individual performance: Personal control (internal locus of control) will be positively related to being rated a high-performing employee within the SDWT structure

Participants

The participants were the 40 student employees of the newspaper, [redacted for review]. There were 15 male and 25 female participants. There were 25 Caucasian, 8 Hawaiian or Pacific Islander, 4 Asian, 2 Latino/a, and 1 Black participant. All participants were under age 30.

Measures

Participants completed measures of ambiguity tolerance (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010), locus of control/personal control (Paulhus, 1983), and Big Five personality dimensions extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience (Gosling, Rentfrow, & Swann, 2003).

The newspaper editor (a student) and the staff advisor (who also works as a professional journalist) conducted performance evaluations for each participant. They categorized performance on a three-point scale as either outstanding, satisfactory, or unsatisfactory. Our outcome variables were employee performance as measured by this evaluation, number of newspaper pages per issue, and advertising revenue dollars.

Procedure

The editor, working with the newspaper's staff advisor, reorganized the newspaper into self directed work teams. Before the reorganization, the newspaper was structured by department. Each department had an editor, and the department editors reported to the managing editor. The impetus for the reorganization was the managing editor's sense that the student workers felt disconnected from the work, gave it a very low priority, and allowed the newspaper's performance to suffer as a result.

Transition to self-directed work teams

The transition to SDWTs was undertaken at the beginning of the fall semester, 2010, by agreement between the managing editor and

the newspaper's staff advisor. Before the transition to self-directed work teams, there were regular (if poorly attended) all-staff meetings and the major positions were as follows: Editor-in-Chief, Assistant Editor, Design and Layout Editor, [redacted] (four year campus) News Editor, [redacted] (two year campus) News Editor, Arts & Culture Editor, Sports Editor, Staff Writers (2), Contributing Writers (2), Business/Account Manager, Advertising Manager. The new organization contained four Self Directed Work Teams:

News: 4 writers, 1 sections editor, 1 photographer, 1 graphic designer, 1 layout designer

Arts & Entertainment: 4 writers, 1 sections editor, 1 photographer, 1 graphic designer, 1 layout designer

Sports: 2 writers, 1 sections editor, 1 photographer, 1 graphic designer, 1 layout designer

Advertising: 3 advertising representatives, 1 graphic designer

Support and management positions were administratively one group, but were not organized into a self-directed work team as their tasks were not considered sufficiently interdependent.

The responsibilities of the Editor in Chief shifted from directing assignments to providing resources. The all-staff meetings were replaced with individual meetings for each SDWT, so that instead of trying to coordinate the schedules of dozens of staffers, each team only had to schedule meetings of a maximum of eight members.

Results

Productivity

Our first hypothesis was that productivity would increase under SDWTs, consistent with previous research. In the most recent academic year, record keeping was the responsibility of an individual in the support and management group. This individual carefully kept records

month by month. In the previous year, only yearly totals were kept. The editor in chief believes that advertising numbers were improved in the most recent year because of the SDWT structure; the self-directed advertising team was able to coordinate its cultivation of potential advertisers, and was able to promise advertisers the use of the team's dedicated graphic designer.

The average issue advertising revenue for academic year 2009-2010 was \$250.00. For academic year 2010-2011 it was \$724.23. A one-sample T-test of the 2010-2011 academic year figures compared to the \$250.00 average for the previous year yielded a significant difference ($p=.004$). **Hypothesis 1a was confirmed.** Advertising revenue was significantly higher after the SDWT reorganization. Before the SDWT reorganization, each issue throughout the academic year 2009-2010 was 16 pages. In the fall of 2010, following the reorganization, each issue was 20 pages. In the spring of 2011 each issue was 28 pages. **Hypothesis 1b was confirmed.** Page count was higher after the SDWT reorganization.

Participant performance

We hypothesized that internal locus of control and high conscientiousness would predict high-performing employees within the SDWT structure. Twenty-four of 40 [redacted for review] student employees completed the instrument. The evaluated performance of the responders under the SDWT organization was significantly better than the performance of the nonresponders. On a three-point scale of -1 (unsatisfactory), 0 (neutral) or 1 (excellent), the mean performance of nonresponders was -.25, while the mean performance of responders was .42 ($p=.01$). Bivariate correlation analysis indicated that only locus of control was significantly correlated with performance. Linear regression confirmed that performance was predicted by locus of control alone, Beta = .660, $p = .03$. Neither conscientiousness nor the other four person-

ality variables (extraversion, agreeableness, emotional stability, openness to experience) were significantly related to performance.

Hypothesis 2a was not confirmed, but Hypothesis 2b was confirmed. Internal locus of control significantly predicted performance following the SDWT reorganization. We did not evaluate performance prior to the SDWT reorganization, so we are unable to say whether internal locus of control would have been a predictor of performance under non-SDWT conditions, or how the strength of the relationship between locus of control and performance might differ.

Issues with implementation of SDWTs

While overall the transition to SDWTs had positive results, we did not experience unalloyed success.

Roles and boundaries

Members of SDWTs were expected to fulfill various roles as the situation demanded, rather than performing the functions of a well-defined position. The responsibility of assigning stories moved from the editors to the team members. The advantage of this was that the writers were able to search out and write stories that they found interesting. Editors could still assign or veto stories, but they now did this only occasionally. Many of the staffers voiced appreciation for their new 'empowerment,' and reported an increased level of interest in the story assignments that they were choosing themselves.

Because of the changes noted above, however, the position of Managing Editor held less responsibility. The individual who was in the role of Managing Editor had some conflict with the Editor in Chief over the definition of the role of the Managing Editor, and the individual separated from the newspaper in mid-semester. The position of Managing Editor was then eliminated without incident, indicating that in fact the reorganization had made the position superfluous.

For the Editor in Chief, the devolution of decision making to the staffer level necessitated a delicate balancing act. Article content, team discipline, and workflow processes became points of contention. For the Editor in Chief to step in and exercise authority in a heavy-handed way would defeat the point of SDWTs. Ideally, an SDWT should have the freedom to fail, but at the same time, the teams were working in a campus newspaper of a state university, supported by student and taxpayer funds.

Rapid transition

Very little training was done related to the reorganization. The Editor in Chief and the Staff Advisor moved quickly to remove all restrictions and processes in place to provide an organic setting for the teams to and develop their own processes as they saw fit. Unfortunately, this caused confusion regarding final decision authority and staff member expectations. The only directive given to the SDWTs was that each section had a certain number of pages, and the teams were instructed to fill those sections. This resulted in some confusion among staffers.

Positive outcomes of implementing SDWTs

Meetings

Before the reorganization, the student newspaper had weekly all-staff meetings. These meetings attempted to bring together over 25 students in one room at the same time. Every student had a different schedule of class, work and family obligations, so most of these meetings had fewer than 10 attendees. At no time did every staff member attend the same meeting.

The low attendance at the pre-reorganization meetings was demoralizing to those who did attend; it created the sense that the meetings were not necessary. Those who attended saw little reason to continue. This created a vicious cycle of dwindling atten-

dance throughout the semester. The content of the meetings contributed to the attendance problem. Each meeting's agenda covered every issue of relevance to every member of the newspaper. As a result, at any given time, the topic under discussion was not relevant to most of those in attendance.

As part of the reorganization, the all-staff meetings were discontinued. This relieved the Editor in Chief and the Staff Advisor of the burden of coordinating the weekly all-staff meeting. This change eliminated a frequent cause of discontent among the staffers. In addition, this change forced the staff to open and rely on other forms of communication with one another.

The all-staff meetings were replaced with individual meetings for each SDWT. These smaller meetings were easier to schedule because there were only six to eight members on each team. In addition, the content of the SDWT meetings was relevant to all attendees, and the team members had participation and insight into each project from start to finish. Having meetings within the SDWTs enabled more frequent and timely communication among staffers with interdependent tasks.

Continuity

Prior to the reorganization, writers and editors rarely met with layout designers. A story would be written by one person, transmitted to a folder on the computer, and then eventually "laid on the page" by a layout designer. This created a discontinuity between the intent of the writer and the final product. In addition, layout was done on a short timeline. The layout designers would have to work very quickly on a batch of articles that they had never seen before. This made the job very frustrating. In the two years prior to the implementation of SDWTs four layout designers quit or were fired.

When one layout designer was dedicated to a single SDWT, that designer was able to work with the writers from start to finish. Both

the writers and the layout designers were able to see how their contribution directly translated to the page. When dedicated layout designers, graphic designers, photographers, and writers were able to build relationships within one SDWT they learned that they were able to rely on the same people for consecutive assignments, rather than having to beg for a designer's or photographer's time. This continuity and simplification made everyone more accountable and invested in the product.

Conclusions

The successful functioning of student organizations is of interest to college educators because student involvement in clubs and organizations is associated with academic growth (Huang & Chang, 2004) and gains in critical thinking (Gellin, 2003). In the current environment of cuts to higher education in the United States (Lauerman, 2011; PBS Newshour, 2011), we believe it is important to note that the success of this experience with Self Directed Work Teams was due to having adequate resources, in particular sufficient personnel to staff each work team completely.

Our main finding was that internal locus of control was a significant predictor of good performance under the SDWT structure. This suggests that before undertaking conversion to an SDWT structure, individuals should be screened for locus of control. This finding is consistent with previous research on locus of control. For example, internal locus of control was found to be a significant predictor of timely graduation among college students (Hall, Smith, & Chia, 2008). Surprisingly, conscientiousness was not a significant correlate of performance. Prior to the reorganization, the student newspaper did not have a "purposeful and comprehensive recruitment strategy for new members," which is a hallmark of a successful student organization (Magolda & Ebben, 2006, p. 297). Screening newspaper applicants for internal locus of control may be

one component of an effective and purposeful recruitment procedure in the future.

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APPENDIX A

Research Instruments

Ambiguity tolerance (Herman, et al., 2010):

Items included in final measure:

1. I avoid settings where people don't share my values. [Reverse Coded]
2. I can enjoy being with people whose values are very different from mine.
3. I would like to live in a foreign country for a while.
4. I like to surround myself with things that are familiar to me. [Reverse Coded]
5. The sooner we all acquire similar values and ideals the better. [Reverse Coded]
6. I can be comfortable with nearly all kinds of people.
7. If given a choice, I will usually visit a foreign country rather than vacation at home.
8. A good teacher is one who makes you wonder about your way of looking at things.
9. A good job is one where what is to be done and how it is to be done are always clear. [Reverse Coded]
10. A person who leads an even, regular life in which few surprises or unexpected happenings arise really has a lot to be grateful for. [Reverse Coded]
11. What we are used to is always preferable to what is unfamiliar. [Reverse Coded]
12. I like parties where I know most of the people more than ones where all or most of the people are complete strangers. [Reverse Coded]

Note: All items are scored on a 5-point Likert scale, ranging from "1 = Strongly Disagree" to "5 = Strongly Agree" and a "3 = Neither Agree nor Disagree" option in the middle. (This scoring pattern is inverted for items followed by [Reverse Coded], above.)

Personal efficacy (Paulhus, 1983; Paulhus & Van Selst, 1990)

1. When I get what I want it's usually because I worked hard for it
2. When I make plans I am almost certain to make them work
3. I prefer games involving some luck over games requiring pure skill [Reverse Coded]
4. I can learn almost anything if I set my mind to it
5. My major accomplishments are entirely due to my hard work and ability
6. I usually don't set goals because I have a hard time following through on them [Reverse Coded]
7. Competition discourages excellence [Reverse Coded]
8. Often people get ahead just by being lucky [Reverse Coded]
9. On any sort of exam or competition I like to know how well I do relative to everyone else
10. It's pointless to keep working on something that's too difficult for me [Reverse Coded]

Big Five (Gosling, et al., 2003)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

- 1 = Disagree strongly
- 2 = Disagree moderately
- 3 = Disagree a little
- 4 = Neither agree nor disagree
- 5 = Agree a little
- 6 = Agree moderately
- 7 = Agree strongly

I see myself as:

- 1. _____ Extraverted, enthusiastic.
- 2. _____ Critical, quarrelsome.
- 3. _____ Dependable, self-disciplined.
- 4. _____ Anxious, easily upset.
- 5. _____ Open to new experiences, complex.
- 6. _____ Reserved, quiet.
- 7. _____ Sympathetic, warm.
- 8. _____ Disorganized, careless.
- 9. _____ Calm, emotionally stable.
- 10. _____ Conventional, uncreative.

TIPI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R; Agreeableness: 2R, 7; Conscientiousness: 3, 8R;
Emotional Stability: 4R, 9; Openness to Experiences: 5, 10R.