Skill-Based Pay

Gerald E. Ledford, Jr.
President, Ledford Consulting Network, LLC
2015-B Havemeyer Lane
Redondo Beach, CA 90278
310-318-6405
Gerry@LedfordConsultingNetwork.com

Herbert G. Heneman III
Dickson-Bascom Professor Emeritus in Business Management and Human Resources Department
School of Business
University of Wisconsin-Madison
975 University Avenue
Madison, WI 53706
608-262-9175
hheneman@bus.wisc.edu

June 2011

Prepared for the Society for Industrial & Organizational Psychology, Inc. “SIOP Science” Series
Published by the Society for Human Resource Management (SHRM)
**What Is Skill-Based Pay?**

*Definition*

Skill-based pay (SBP) is a compensation system that rewards employees with additional pay in exchange for formal certification of the employee’s mastery of skills, knowledge, and/or competencies. *Skill* is acquired and observable expertise in performing tasks. *Knowledge* is acquired information used in performing tasks. *Competencies* are more general skills or traits needed to perform tasks, often in multiple jobs or roles. In SBP systems, employees receive additional pay only after they demonstrate the skills, knowledge, and/or competencies that the system rewards. Thus, SBP is a person-based system, because it is based on the characteristics of the person rather than the job. In more common job-based pay systems, pay is based on the job, which employees are entitled to receive even if they are not proficient in their position.

*Background*

Skill-based pay is one of the most widely-implemented, poorly understood and under-researched human resource practices in use today. Part of the problem is that “skill-based pay” is not a single system, but rather a family of loosely related pay...
systems that have different origins, distinct traditions, and suitability to different types of organizations. Opinions about skill-based pay often miss the mark because they apply to one form, without appreciation that other forms may be appropriate for a given organization. Because there is so much confusion about skill-based pay, we begin with a detailed discussion of its different forms and purposes.

Figure 1 depicts the different forms that skill-based pay can take. One dimension is the type of skills, knowledge or competencies that the system can reward: depth (gaining greater expertise in existing skills); breadth (increasing one’s range of skills); and self-management (gaining skills that might previously have been reserved for higher levels in the organizations, such as planning, training, budgeting, etc.). The second dimension focuses on whether the reward offered is a bonus or base pay increase. Different types of SBPs have different configurations associated with different traditions, and goals and implementation processes differ across the different SBP types.

<table>
<thead>
<tr>
<th>Bonus Reward</th>
<th>Depth</th>
<th>Breadth</th>
<th>Self-Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base Pay Reward</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1
Types of Skill-Based Pay Systems
**Depth-Oriented Base Pay Systems**

One type of SBP is old and familiar (System A in Figure 1) in the United States and elsewhere. Depth-oriented plans reward employees for gaining greater expertise on existing skills. Apprenticeships for skilled trades date to antiquity, and the modern skilled trades system dates to the Middle Ages in Europe. In these systems, employees build skills for years, receiving only one or two promotions during their career. Blue-collar skilled trades may receive pay increases as they move from apprentice to journeyman to master craftsman as, for example, an electrician, millwright or toolmaker. The analogous white-collar system is the dual career ladder, which rewards deeper levels of expertise rather than advancement through the management hierarchy. The goals of these systems are building critical specialized skills, attracting talent and retaining employees over the long period needed to build specialized skills. The highest paid members of the dual ladder, frequently designated as Fellows, may be world-class experts in their specialties. The dual career ladder is common in such industries as aerospace, pharmaceuticals, high technology, and others where specialized expertise is a competitive necessity. Professors often find such systems appealing partly because their own career system is directly analogous to medieval trades system. An academic career is encompassed by the three job titles of Assistant Professor, Associate Professor and Professor, with each promotion taking years of work, marked by formal certification of achievement.

The disadvantage of these systems is that they can create overly-specialized employees who identify more with their craft or profession than with the mission of the
organization. In the skilled trades, sharp jurisdictional lines between crafts has led to jokes about how many journeymen it takes to replace a light bulb. (One answer is three: a mechanic to hold the ladder, a pipefitter to confirm that no plumbing is involved, and an electrician to screw in the bulb). Over the past 20 years, the strong trend in the United States has been toward multi-crafting, in which employees gain proficiency in two or more trades. Such systems add a breadth dimension and look more like System B, which we will consider next.

**Breadth-Oriented Base Pay Systems**

System B in Figure 1 indicates the type of system that is most often recognized as “skill-based pay.” The goals are to reward an appropriate balance between employee flexibility through skill breadth (the ability to do different jobs in the organization); skill depth; and self-management skills (such as training, hiring and performance appraisal) that are critical in systems with few or no supervisors. This type of system is most common in manufacturing, but is also used in some other types of organizations that require high employee skill and employee involvement (such as call centers, help desks, back office processing operations in insurance and financial services, and even specialized retail).

This pay system originated in Procter & Gamble in the 1960s in “greenfield high involvement plants,” which were marked by a high level of employee involvement, a de-layered hierarchy, use of self-managed teams, high levels of training, and extensive communication of business results. This type of system became the norm in P&G as the high involvement model became diffused throughout the company. SBP worked
because it helped facilitate the overall organizational design. Employees learned the technical, social and managerial skills that they needed to manage complex technical systems with little or no managerial support.

In the developed world, manufacturing and back office operations increasingly require employees to act as knowledge workers rather than button pushers. Low-skill operations are being automated or sent to low-wage locations in the developing world. The jobs that remain typically require higher skills, flexibility to do different jobs, the ability to work without close supervision, and a high level of training. Employees must understand the overall production or service delivery process and respond quickly when problems arise. None of this is possible if employees know only one job and therefore one small part of the overall process.

In the past two decades, the rise of lean systems has accelerated these trends. Lean demands much more of employees, including self-inspection, involvement in cost reduction efforts, teamwork, cross-training, and rapid adjustment to changes in market demand for different products. SBP is often used to motivate employees to acquire these capabilities.

A related but historically distinct tradition has been the use of competency-based pay for managers and professionals, originally an outgrowth of work on competencies by psychologist David McClelland. In many cases, competency pay plans are a natural extension of the efforts of companies to build distinctive competencies that meet organizational needs. Different plans may emphasize breadth, depth, or a combination of both, but these typically go beyond the technical skills orientation of
the dual career ladder. For example, a food processing company created a competency pay plan for all managers that based pay increases on two traditional managerial competencies (leading for results and leveraging technical and business systems) and two competencies that reinforced major corporate talent management and quality initiatives (building workforce effectiveness and meeting customer needs). One area in which competency systems have become very widespread is education (see sidebar).

The limited data on SBP usage indicates greater use than many observers realize. A survey of Fortune 1000 firms by the Center for Effective Organizations in 2002 found that 56% used SBP (broadly defined), and that the percentage of firms using it had been relatively unchanged since 1993. However, the vast majority of users covered less than half their workforce with SBP. A study by the International Public Management Associations for Human Resources found that 22% of public sector organizations used SBP in 2007. A 2007 Towers Perrin study of over 600 managers in 21 countries found that 27% of cases base salary increases on competencies (defined as proficiency in core knowledge or behavior) for executives, 36% of cases for managers and professionals, and 28% of cases for non-management. In addition, increases were skill-based (defined as acquisition of new skills) in 9% of cases for executives, 15% for managers and professionals, and 18% for non-managers. Finally, the prevailing Japanese salary system incorporates a high degree of SBP. Typically, one pay grade schedule covers all employees, including executives, and job grade is based on all the jobs and responsibilities the employee is able to do, not what the worker is actually doing. A study by American and Japanese researchers found that “knowledge and skill”
is one of three roughly co-equal factors (along with effort and cooperation with supervisors) in determining pay. This reflects the Japanese emphasis on job rotation, cross-training and gaining identification with and understanding the needs of the company as a whole.

Academic research on SBP is limited and much of it is not current, but the available studies focus on what we have called Type B systems. The available data are quite positive in indicating that there is a payoff from adopting such plans. For example, a study of 97 skill-based pay plans sponsored by the American Compensation Association found that two-thirds to three-quarters of these plans were rated as successful on a wide range of outcomes, including reduced staffing, increased flexibility, increased productivity, higher quality, and lower turnover, despite higher average wages. That is, SBP users had fewer, more highly paid, and more productive employees. A follow-up study several years later found that the plans had a high survival rate and generally enjoyed continued success. Finally, a rigorous case study in an auto component plant found that the plant had 58% greater productivity, 16% lower labor cost per part despite paying higher wages, and 82% reduction in scrap versus a comparison plant.

**Bonus Systems**

The armed forces of the United States are covered by a unique bonus SBP system that is almost unknown outside the military. This is shown as System C in Figure 1. Covering 1.5 million military personnel, this is the most widely used SBP system in the United States. As far as we know, this system has not been the subject of
academic research; descriptions of it are limited to obscure federal publications. The first author learned about this system while consulting to a Quadrennial Review of Military Compensation in 1996.

The goal of the system is to manage attraction and retention in particular occupational specialties. An HR group in the Pentagon monitors the degree to which the services have been able to fill each of hundreds of occupational specialties. If the services have difficulty attracting and retaining qualified personnel, a temporary enlistment and/or reenlistment bonus is offered. This may be modest – most such bonuses appear to be less than $10,000 – but it is possible to offer up to $40,000 for enlistment bonuses and $150,000 in reenlistment bonuses. Reenlistment bonuses are higher partly because it is easier to verify the skills of veteran personnel. Bonuses are used for both officers (for example, aircraft pilots and medical personnel) and enlisted personnel (for example, Special Forces). The nephew of the first author, a Marine helicopter mechanic, was offered a $70,000 bonus to reenlist for two years at the height of the Iraq war. This in effect would have doubled his cash compensation. Enlistment and reenlistment bonuses are used sparingly, and disappear as soon as staffing levels for particular specialties are filled. The specialties for which bonuses are paid and the amounts of the bonuses change frequently, indeed so frequently that the military does not announce them.

A Congressional Budget Office report (2007) found evidence that reenlistment bonuses were an important retention tool but that enlistment bonuses were not especially cost-effective. This may be because it is easier to fill many critical specialties
by retaining incumbents, rather than by finding qualified civilian candidates. In addition to attraction and especially retention, there are many advantages of this system for the military. The system is targeted exactly to the specialties with a labor supply shortage, and these can change as often as needed. The very flat, time- and rank-based military salary system, which is important to military culture, can be preserved while in fact making available the compensation needed to attract specialists. Finally, salary costs draw close political scrutiny while bonus costs typically do not.

We believe that this type of pay system should be considered more often by non-military organizations. In particular, organizations in shifting labor markets or with shifting skill needs, such as high technology firms, may find it advantageous. The only two case examples of SBP failure to be publicly reported are both in high tech (Intel and Motorola). In both cases, the constantly shifting technological and business environment made base pay systems cumbersome and difficult to implement. Bonus-oriented systems can be created much more quickly, targeted more selectively, and changed or terminated much faster than typical base pay plans. However, quickly changing bonus systems may be difficult to communicate and manage, and bonus SBP systems may invite sloppy designs because the cost of error appears to be so low.

We know of no bonus-oriented systems that reward skill breadth or self-management skills. However, bonuses in principle could be used to reward any type of skill development. We believe that skill-based bonuses are greatly underused given the continual, rapid change of the U.S. economy and labor force, which may lead to paying permanent salary increases for skills that become obsolete over time.
Figure 2 summarizes our key points about the different forms of SBP. It depicts the type of skill emphasized, the goals, and the organizational conditions that best fit each type.

### Figure 2
Comparison of Different SBP Types

<table>
<thead>
<tr>
<th></th>
<th>Type A</th>
<th>Type B</th>
<th>Type C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of skill emphasized</strong></td>
<td>Depth</td>
<td>Breadth, depth, and/or self-management skills</td>
<td>Depth-oriented bonuses</td>
</tr>
<tr>
<td><strong>Examples</strong></td>
<td>Skilled trades systems, dual career ladder, academic career</td>
<td>SBP supporting high involvement and lean systems; competency pay for professionals</td>
<td>Critical skills bonuses in the military</td>
</tr>
<tr>
<td><strong>Goals</strong></td>
<td>Deeper employee expertise</td>
<td>Greater employee capability and flexibility, broader perspective, increased self-direction, new and/or deeper skills</td>
<td>Managing rapid changes in talent availability and skill needs; attraction and retention of critical skills</td>
</tr>
<tr>
<td><strong>Conditions that best fit each type</strong></td>
<td>Competitive demand for specialized expertise; multi-year training cycles for key skills, making employee retention highly desirable</td>
<td>High involvement and lean organizations that require high employee versatility and capability; organizations requiring new or deeper skills of managers and professionals</td>
<td>Rapidly changing demand for specialized skills</td>
</tr>
</tbody>
</table>

### How Is SBP Established?

Whatever the form of SBP, establishment of a SBP plan typically involves several general steps:

1. Identify potential SBP jobs; that is, a job in which development of skill depth and/or breadth is possible and desirable.
2. For each job level, identify the specific skills (both depth and breadth) sought.

3. Evaluate the potential costs and benefits of the SBP plan (these are discussed below); proceed with further consideration of the SPB plan only if the likely benefits outweigh the costs for the organization.

4. Develop the appropriate techniques that will be used to assess the new skills, knowledge and competencies gained and/or developed.

5. Establish certification standards and processes for employees to demonstrate their successful skill acquisition.

6. Determine the dollar amount of SBP for the acquired skills, such as indicating the payout for each skill block.

*Implementation Factors*

Another important factor in setting up an SBP is its implementation. Developing specific implementation plans, involving and communicating with all affected employees, and then carrying through on the implementation plan, are all necessary actions.

SBP typically increases average hourly rates. However, SBP also typically leads to lower labor costs overall. How does this happen? Average pay rates go up because employees receive more pay for learning new skills and competencies. However, these costs usually are more than offset by leaner staffing and higher performance. It is critical for organizations to determine prior to adoption of SBP whether such a result is likely. Some organizations, especially those that are highly labor intensive, may find SBP too risky to adopt.
The increased pay and clearly specified career paths under SBP tend to make these plans popular with many employees. However, some employees may dislike the plan, such as senior employees near retirement, employees with low growth needs, and those with low ability to learn new skills. In addition, employees in general may become disgruntled with the lack of opportunity to earn more pay if training and certification opportunities are limited.

Greater employee training is potentially a high cost. Multiple forms of skill development may be necessary, including a combination of on-the-job, classroom and off-site training. Training development and delivery, and more importantly providing enough time for employees to receive training in new skills, can add costs.

Administrative costs may also increase under SBP. There may be higher costs for the management of job rotation, skill assessment development and conduct, certification processes, and record keeping.

Market pricing of SBP jobs is difficult. Typical market pay surveys examine comparable jobs in terms of job content only. Comparing pay rates for those jobs to pay rates for SBP jobs is possible but not easy. Essentially, entry rates, top rates, and perhaps a level in between usually can be priced using relevant salary surveys to provide a skeleton for SBP levels. The specific steps in the SBP plan may not have analogs in salary surveys, but these steps can be priced relative to each other within the overall structure to provide internal equity.

Finally, there is the matter of implementation. Implementation begins with management’s commitment to develop a design that has a positive ROI,
communicating the goals and mechanics of the plan to employees, working through the inevitable problems that arise, and updating the plan periodically. Because any pay system change is likely to be an emotional issue, the potential dollar and goodwill costs of a failed SBP implementation are huge.

**What Should Heather Jefferson Say?**

What should Heather Jefferson say to the senior executives who have suggested using her plant as a pilot for an SBP plan? As a responsible HR professional, Ms. Jefferson should help senior managers in the following ways:

1. Help the executives fully understand the costs and benefits of SBP in their particular situation. It is important to provide a clear understanding of how SBP would deliver a good return on investment for their business before proceeding further.

2. Work with them to conduct a diagnosis of the appropriateness of SBP for their organization, perhaps with the help of a task team. Factors such as workforce characteristics, training capability, change in technology and work processes, how well the organization has identified and documented the skills required in the work process, and many other factors could make SBP a good fit or a poor fit.

3. Help senior managers understand the design options that might maximize benefits and minimize costs. For example, the SBP plan might apply to all employees or only those in some units. SBP might be phased in over time
starting with a pilot unit. The skills covered by the SBP plan may be comprehensive or highly targeted to a few types of skills that are especially critical in the organization. Identifying the design options may take considerable preparatory work.

4. Ensure that senior managers understand the implementation challenges and appropriate timeline for developing SBP. Implementation challenges may include difficulty in reaching agreement on key design choices; convincing employees and managers that SBP is in their interest; finding time for training, especially if the organization is busy; and more broadly, balancing the need to deliver products and services with the need to learn new skills for long-term benefits.

5. Develop a comprehensive communication plan, including identification of the target audiences, the key messages for each of them, media to be used, timing and frequency of messages if delivered multiple times, and communication products (brochures, etc.) to be provided at communication events.

6. Finally, develop a risk management plan that takes into account the possibility that the plan may fail or have undesirable consequences. Would SBP be very unpopular with certain employee groups (such as low-skilled employees, especially if they are near retirement age)? If so, does this increase the risks of a union organizing campaign? What are the odds that overall costs would not be offset by productivity, quality, retention, and other gains, threatening competitiveness? The analysis should consider risk mitigation options if the
threats are serious. A slower or more limited implementation, greater communication efforts, and specific attention to groups that may feel threatened by SBP may be necessary.

By taking steps, Ms. Jefferson demonstrates her strength as a partner in a business decision about what SBP might look like and whether it would be appropriate in her organization.
Sidebar: Teacher Competency Pay Programs

For decades, the teaching profession has used the single salary schedule to determine teacher base pay for new hires and for pay progression. This schedule is a simple matrix with seniority steps and educational credits/degrees on the two axes, and salary as the cell entry. The single salary schedule has been criticized for not rewarding teacher competence, since seniority and educational credits are weak proxies for teacher classroom competence and effectiveness.

In response, competency-focused pay programs are being developed and used to determine pay increases. The programs are a significant part of broad-based attempts to improve teacher quality. Three programs are most prevalent: competency blocks, competency-based teacher evaluation, and the National Board for Professional Teaching Standards certification.

*Competency Blocks:* A school district may identify specific competency blocks it wants teachers to acquire. Examples include technology usage, analysis of student performance data and curriculum unit design. Teachers elect to complete the blocks and have their mastery of the blocks assessed. Typical dollar awards for mastering the skill block range from $300 to $3,000.

*Competency-Based Teacher Evaluation:* Competency-based teacher evaluation replaces the typical casual teacher performance evaluation with rigorous assessment of teachers’ classroom performance competencies. Assessment results then serve as a basis for determining pay raises, as well as progression through successively higher competency levels.

The foundation of the program is a competency model used for teacher assessment. A popular model is the Framework for Teaching, which defines four teaching performance domains (planning and preparation, classroom management, instruction, and professional responsibilities). Each domain includes numerous specific performance components, such as “communicating clearly and accurately” for the instruction domain. Each component has more specific task elements, such as “directions and procedures” for the “communicating clearly and accurately”
component. In turn, each element has four levels of performance (unsatisfactory, basic, proficient, distinguished), each of which is described with behavioral examples or rubrics. As an example, the proficient level for “directions and procedures” is defined as “teacher directions and procedures are clear to students and contain an appropriate level of detail.”

The actual assessment process involves collection of performance samples from multiple sources, such as classroom observation and instructional planning logs. There are multiple evaluators, such as principals and peers. Evaluators receive special training in the competency model, performance samples and ratings of performance.

A pay schedule is developed to show the relationship between competency ratings and pay raises in either dollar or percentage terms. The pay schedule may also reflect other performance components, such as growth in student achievement test results. Finally, the pay schedule may show career pay levels (e.g., entry, novice, career, advanced, accomplished) and progression based on competency assessment results.

**National Board for Professional Teaching Standards:** The NBPTS developed and administers a voluntary certification assessment to recognize effective and accomplished teachers. There are specific high standards of what teachers must know and be able to do in 25 certificate areas. Assessments are based on teacher-prepared portfolios of classroom instruction videos and examples of student work, and performance on several online assessment center exercises. Multiple trained assessors evaluate each teacher candidate for certification. The certification is good for 10 years. States and school districts provide incentives for certification of $2,000 to $10,000 annually for five to 10 years.
Further Readings


Dos and Don’ts

1. *Do* carefully craft the design of the plan to the specific needs of the organization.

   It is almost impossible to borrow any other organization’s design. For the plan to have a solid ROI, it must fit the specific organizational needs and conditions of the adopting organization.

2. *Don’t forget implementation—it is more important than design.*

   Good implementation (communication, training, renewal systems, etc.) can save a mediocre design, but a perfect design will have a poor ROI if implementation is inadequate.

3. *Do think carefully about how to price the system to the labor market.*

   Appropriate pricing is important for ROI because it is the key to labor costs, employee attraction and retention.

4. *Don’t expect the plan to last forever.*

   Research indicates that even successful plans must be revised every few years to adjust to the evolving needs of the organization.

5. *Do leave enough time to do it right.*

   Skill-based pay is a major change because it involves compensation—which all employees care about deeply—and because it affects so many other organizational systems. Plan on a cycle of six to 12 months for design and implementation.
Frequently Asked Questions

1. How do we decide whether skill-based pay is right for us?

The key question is whether the likely advantages of the plan—greater flexibility, lower management and employee staffing, and reinforcement of high involvement and/or lean systems—offset higher average wage rates for those employees who remain, as well as higher training and administrative costs. Determining if SBP is the right pay system requires careful analysis for any specific organization.

2. What organizational conditions indicate that skill-based pay is not for us?

SBP systems usually are ineffective if the work is low-skill—there is not enough ROI to justify the costs of SBP. Unstable management, organizational structure, or technology is very unfavorable because it is difficult to project the specific SBP design that will meet organizational needs. As with any major change, top management understanding and support is critical. A workforce that is very old on average may have little chance of earning SBP increases before retirement. Finally, a workforce that is low in growth needs is unlikely to want SBP.

3. What are the most favorable conditions for SBP?

The most basic condition for success is that there is a wide range (in depth and or breadth) of skills, knowledge, or competency for employees to acquire and use in their jobs. SBP pay plans tend to be more effective in settings such as manufacturing, where the skills, knowledge, and competencies are relatively concrete and easy to assess. Capital-intensive technologies (usually process technologies, such as chemicals, paper and food processing) are favorable because the cost of design errors matters less—employee pay usually is a small part of total costs. The use of a high involvement or an advanced lean organization design is favorable because either design requires a high level of employee skill and flexibility, leading to a positive ROI for SBP.

4. What are the critical issues in union settings?

Compensation is a collective bargaining issue in union settings, so the union must partner in the design process. There are many SBP examples in union settings, and SBP designs do not look significantly different from those in non-union settings. Union members tend to prefer the higher average pay rates of SBP. Traditional union concerns about organizational justice tend to lead to a strong focus on fairness in assessment of employee skills, providing training and job rotation opportunities, and so on. This focus can be positive for the success of the system.
5. How do we get employee acceptance of the system?

Acceptance of SBP is a basic change management issue. Clearly, employees need to understand how they can make more money under the system, and need a realistic idea of how long it will take to advance. Not all employees will prefer any pay system design. Each pay system has winners and losers, and losers tend to be vocal about pay. The key is making sure that the employees who are happy with the system represent the ones that best fit SBP—that is, those with the skills and orientation the organization needs to succeed—and that those who are unhappy are less valuable to the organization.