

Vendor Selection within the Education Environment: you harvest what you sow

Educational institutions are beginning to realize the important role that suppliers can play in contributing to overall “learning productivity.” Combined the trend towards developing long-term relationships, the importance of vendor selection is becoming even more pressing. The purpose of this paper, therefore, is to introduce administrators to three different approaches that can be used during the vendor selection process. The various pros and cons of each approach will be discussed and then the paper will conclude with recommendations for implementation within the context of the education environment.

Abstract

Many studies have been published concerning the crucial role that vendors play in contributing to the overall performance of buyers. Similar conclusions can be drawn from parallel studies in the area of strategic alliances and partnership marketing. Given the potential importance of the supplier relationship, the process used to select the vendor becomes an even more critical decision for administrators.

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There are numerous articles that discuss methods for selecting vendors. Although a review of educational sites on the Web suggests that some of the larger educational institutes are beginning to adopt one or more of these “best” practices, there is no single article that attempts to survey approaches from the perspective of the institutional, and more specifically, educational buyer. While the underlying methodologies are the same for both institutional and commercial buyers, meaningful differences also exist. For example, differences in goals tend to modify selection criteria; specialized training and experience in supplier relationships are also often absent in the non-profit setting. Institutional buyers are also likely to find themselves accountable to external stakeholder groups (e.g. local and state government units, community leaders, etc). Fortunately, the lessons that can be learned from industrial applications are very informative and can with some modification be instructive for educational leaders.

It is best to begin our examination of vendor selection by first placing it within the context of the organization’s decision-making process. While variations exist between institutions, even within a given state or community education system, the classic purchase process for a new (non-repeat) purchase is as follows:

- Step 1: Need recognition
- Step 2: Determine the characteristics of the need
- Step 3: Prepare formal specifications

- Step 4: Solicit bids
- Step 5: Review bids against selection criteria
- Step 6: Select a vendor
- Step 7: Select an order/replacement routine
- Step 8: Evaluate performance

For the purpose of this paper, however, the eight steps can be reduced into three distinct stages: 1) need clarification [steps 1-3], 2) vendor selection [steps 4-6], and 3) performance feedback and order routine [steps 7 & 8].

During the first stage of the decision-making process (need clarification) organizations have traditionally focused on either product or supplier characteristics, but rarely both. For example, in the 80s there was the saying, “No one ever got fired for buying an IBM.” In other words, supplier characteristics were all-important and product considerations secondary. In the 90s, the focus was predominantly on individual product attributes. As long as a supplier had a “.com” after its name, no one bothered to question the long-term viability of the company.

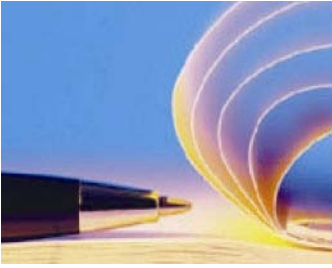
Recent market shakeouts, however, have served to remind us again of the importance of understanding both the history and the future prospects of the suppliers we engage. Fortunately, most organizations are now focusing on building long-term relationships with their vendors and, as a consequence, have learned to consider both product and supplier criteria. In this regard institutions are well-served by having a well-considered vendor selection process.

Using detailed project requirements, administrators can thoroughly document their decision process. Administrators are also encouraged to ask suppliers to commit to long-term pricing strategies to minimize escalating future costs. Given that costs are such a big concern for most educational institutions, it is advisable to ask suppliers to prepare both a first cost (initial price) and operating cost (on-going costs) projection. History suggests that education systems often place too much emphasis on the initial price and fail to consider the long-term implications of maintenance and/or upgrade costs. As a consequence, it is important to prepare specifications that are rigorous enough to aid the vendor’s understanding of your needs but not so inflexible that it precludes the creative examination of viable alternatives.

The needs clarification stage will inform both the criteria that administrators use for selection as well as clarify their understanding of their original need. Administrators are encouraged to develop a shared understanding of the issues and objectives that are involved in each purchase category. As a general rule, cross-functional teams are used when seeking common agreement on product/supplier requirements. If possible, administrators are also encouraged to benchmark their selection process with peer institutions.

Vendor Selection

The three most common and well-understood vendor selection methods are known as the categorical, the weighted point and the cost-ratio plans. These methods were also selected for discussion because they are relatively flexible and yet are robust enough to account for most of the needs that will be experienced within the education market. In addition, these methods



provide a range of complexity to accommodate modestly simple purchases to those involving more extensive capital investments.

Categorical Plan

The categorical plan is one of the more informal or basic approaches to vendor selection. Under this plan, each member of the purchasing team develops his or her own list of significant selection factors. The selection criteria may or may not be reconciled within the group. Before the group meets, each member will categorize suppliers against the criteria they developed using a simple scale such as preferred, satisfactory or unsatisfactory. The group then meets to discuss their findings, attempt to reconcile differences and to choose a preferred vendor. Benchmarking the selection criteria from peer institutions can further bootstrap the process. Institutions can also employ a brainstorming technique (such as those used in focus groups) to develop their list of selection criteria.

Although the categorical plan is informal, it is generally viewed as superior to a purely convenient, individual judgment approach. The individual judgment approach tends to be very subjective and prone to interpersonal biases or preferences that may exist between a given buyer and vendor (or the salesperson representative) and/or the product itself. For example, some individuals prefer working in a Macintosh environment while others prefer the PC platform. As a consequence of their personal preferences, they may unconsciously favor one vendor over another. If you are using individual judgment it is also very difficult to document the objective basis upon which the vendor selection is made.

Weighted Point Plan

When an organization uses the weighted point plan in vendor selection, in addition to criteria selection, it assigns a weight to each of the factors that are used in the selection process. Selection criteria are typically selected on the basis of expert opinion, the Delphi Method, benchmarking, brainstorming or some combination of techniques. Individual factor weights are also assigned using a similar approach. If the resources and expertise are available, it is also possible to use multiple regression analysis to determine the factor weights. The two most common methods used for criteria selection and the weighting of factors is either expert opinion or the Delphi technique.

In a simple application of the model, the vendor that scores the highest on the procedure is the one that is selected. There are, of course, any number of different combinations that can result in a given vendor score. Organizations are therefore well advised to contain the model by specifying *a priori* decision rules for using and interpreting the weighted point approach. For example, what are the minimum (if any) cutoffs for individual performance factors? For example, if a vendor has an unsatisfactory warranty program you must question whether you would want to buy from the supplier even if they scored higher overall than did the other vendors. Also, what is the minimum overall total score that your organization is willing to accept?

Organizations using the weighted point plan are also encouraged to monitor for wide variations in scoring between individual team members. Wide variation can suggest differences in information

or unexpressed preferences for other criteria. If the variation in scoring is too great, the team is well advised to discuss differences before proceeding further with the process. Finally, an organization will average scores and make their choice based on the highest overall score; given identified constraints. If physical distance or time constraints make it difficult for team members to meet, an electronic Delphi technique can also be used to reconcile differences in scores resulting in the final choice of supplier.

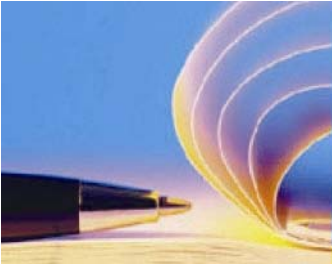
The primary advantages of the weighted point approach are that it is more objective than the categorical approach and yet can be adapted to multiple situations and applications. The model also permits some analysis over time as to the accuracy or value of the model when selecting vendors. The primary disadvantages are that it takes more time and energy to initially develop the model. Also, given that there are multiple ways in which any given total score can be derived, users should be engaged in frank and open discussion about how differences in vendors were determined.

Cost-Ratio Plan

The cost-ratio plan takes the selection process one step further by estimating the total effective cost of purchasing from a given vendor. Consider the following example: Vendor A charges an initial \$1000 for an online Web-based registration software package. They provide no special training and no special warranty coverage. Operating expenses include an access charge of \$1 per online registration. Future upgrades of the software are anticipated to be \$500 every two or three years. In this simple example, upgrade costs will accrue in the middle of year three and at the end of year five. Vendor B, by contrast, charges an initial fee of \$10,000. Vendor B's product includes, however, a special feature that will save the buyer approximately \$750 per year by automatically generating reports that would otherwise have to be prepared manually. Vendor B also provides training and a one-year money back guarantee. There is no access surcharge but there is an annual maintenance fee of \$1,5000. All future upgrades are included in the annual fee. We will assume for the sake of example that the two vendors are otherwise offering similar products.

On one level, comparing Vendor A with Vendor B appears to be a daunting task. However, modeling the financial implication of the decision makes comparisons a relatively easy task. Although the value of the training and warranty have to be estimated by the buyer, the model allows the buying organization to calculate a reasonable estimate of the true, total cost of ownership. For simplicity, the buyer can request that the seller calculate estimated future costs for the buyer given whatever assumptions the buyer would like to consider. Ideally the model will be provided in a spreadsheet format thereby allowing the buyer an opportunity to conduct a sensitivity analysis using different assumptions.

By year two, the true effective-cost of Vendor B's product is less than Vendor A. By the end of year five the cost of product B is nearly 1/3 the cost of product A. If the buyer had not considered the future costs associated with the product, the logical choice might have appeared to have been to select Vendor A, all other things being equal. Of course, all things rarely are equal.



The advantages of the cost-ratio plan are that it forces administrators to be as objective as possible in vendor selection. It also focuses attention on both current and future costs thereby rendering the true costs of ownership more explicit. The true effective-cost calculations can also be very persuasive in arguing for, or supporting, the selection of a given vendor. The two most notable disadvantages are that the output of the model is only as good as the assumptions that are made and the approach does require more time and initial expertise in creating the model. Given the potential criticism of “only as good as your assumptions” some organizations have relied on the model to test various assumption (e.g., sensitivity analysis or “what if” scenarios).

Recommendations

Suppliers are an essential educational input and as such need to be managed like all other resources. To this end, three approaches to vendor selection were reviewed in this paper. Each approach has its own set of strengths and weaknesses, but the underlying message is that administrators are encouraged to be as deliberate as possible in how they choose their preferred vendors.

The first recommendation that follows from this review is that administrators should *a priori* specify the process by which they select their vendors. At a minimum, clarifying the process will enable better communications with internal staff as well as to help the suppliers that are competing for your business. In the long run, developing a clear understanding of the selection process will enable organizations to more quickly correct and modify deficiencies as well as replicating particularly good processes in other departments within the organization. An organization can assign a committee (perhaps taking advantage of any internal expertise) or they can hire an outside consultant to help them decide which process or processes they will use in the future.

Given that the weighted-point and cost-ratio plans are somewhat more complex, I also encourage administrators to seek assistance from the vendors that are selling products or services to their organization. In other words, ask your vendors to develop their own weighted-point or cost-ratio selling tools. If the tools are formatted using an electronic spreadsheet, you can easily modify information such as selection criteria, weights and other assumptions. If buyers and sellers are truly going to begin working together in a more collaborative manner, these kinds of requests should become more commonplace.

Finally, organizations should periodically review the effectiveness of their vendor selection process. One of the benefits of formally specifying the process by which vendors are to be selected is that you can use the very same process to evaluate the performance of your vendor. You do this by comparing your expected results (compiled during the initial selection process) with the vendor’s actual performance and then you use a method known as GAP analysis to note where deficiencies exist. In such a manner, the pre and post-evaluation process becomes self-correcting and the institution itself becomes a learning organization.