Defining a strategy for an institution of higher education

Dr. Scott Moore
Palmetto Insights

February 4, 2022

Executive Summary

Learning objective: After finishing this paper, a higher education institution's leadership team should be prepared to undertake the challenge of defining its strategy. This paper also should help the leaders who are tasked with defining the strategy for a new program.

Purposes: This white paper has four basic purposes that build on each other:

1. Define what a strategy is and why you should create one
2. Explain the foundational strategy work by Michael Porter so as to develop a vocabulary for talking about strategy
3. Define a new model — the Generalized Differentiation (GD) model — which builds on Porter's work while also making it more detailed and expansive, thus enabling specific conclusions to be drawn for defining an institution's strategy
4. Use the GD model as the basis for fully specifying, within a framework defined by Donald Hambrick and James Fredrickson (business professors at Columbia University and the University of Texas, respectively), an institution's strategy

Contents

Chapter 1

Introduction

The market for higher education was stagnant for a very long time — defined by geography, degree programs, class, money, etc. It was bound by the traditional lecture pedagogy: a faculty member, a subject matter expert, standing in front of a classroom and "delivering knowledge" to the student. This model was resistant to change for several centuries, but change has come to education in recent years. Other delivery media have been brought into use during the past 50 years, including cassette tapes, CDs, and specialized communication hubs. Over the past 10 years or so, the use of the internet to deliver learning has increased markedly to the point that it is now an accepted, and expected, part of any institution's portfolio. This increase means that higher education leaders must make more decisions about more programs delivered in a variety of ways. All of this new activity has led to more academic leaders facing questions and making decisions about online learning — what programs to launch, what investments to make, how to design and sequence programs, and on and on. This white paper will provide guidance for those academic leaders.

It's a big topic, spanning the whole organization, so this white paper takes it step-by-step.

Using a clear strategy to guide decision-making is a reliable tool for organizational leadership across industries. That is the approach taken here, with four basic sections each building on the previous one:

1. Define what a strategy is and why you should create one
2. Explain the foundational strategy work by Michael Porter, an economist and professor at Harvard Business School, so as to develop a vocabulary for talking about strategy

3. Define a new model — the Generalized Differentiation (GD) model — which builds on Porter's work while also making it more detailed and expansive, thus enabling specific conclusions to be drawn for defining an institution's strategy
4. Use the GD model as the basis for fully specifying, within a framework defined by Donald Hambrick and James Fredrickson (business professors at Columbia University and the University of Texas, respectively), an institution's strategy

After reading this paper, an organization's leadership team should be prepared to undertake the challenge of defining a strategy and thereby enable themselves to address their important questions related to online and other programs.

Chapter 2

The Need for a Strategy

For some, a strategy is something that has been written — sometimes through a process that involves countless meetings and untold memos — and then put on a shelf to be forever ignored. Others have operated in an organization that, as far as is known, does not have a strategy. A lucky few of us have worked in an organization that has a clearly stated strategy. In this section I make the case for having a strategy and at what level of the organization it should be defined and be operational.

What exactly is a strategy? I will defer answering that question for now, but I define it loosely and provisionally as the following:

> A strategy is a statement describing where the organization is going to compete, how it is going to compete, how it is going to win, why it will win, and the steps that it will take to achieve success.

2.1 What does a strategy do?

The process of defining a strategy exacts its toll in the time and attention of organizational leadership, taking time from other, seemingly more pressing tasks. However, leadership should make the effort to construct a robust strategy since the benefits of having one are significant:

Direction and priorities At its very foundation, a strategy is a statement of what's important to the institution. It's a declaration to its leaders, employees, students, contractors, and vendors of what it hopes to accomplish and how it will do so. The people operating within the

strategy's span change over time, they have different pressures affecting them, and the environment is constantly shifting around them, but the strategy acts as a given, a reference point for setting priorities for both action and investment. This institution-wide priority setting is also the best means of driving large, transformative investments throughout the organization. Any smaller scope would limit the ambitions of such an investment.

Alignment across the organization A higher education institution typically is a large, complex, diversified, and dispersed organization. It is impossible for its leaders to make decisions about any but the most global and significant issues. A clearly stated, well-publicized, and effectively enforced strategy can be a tool for guiding the decision-making of people throughout the institution at its many schools, departments, institutes, and programs.

Continuity across leaders Leadership of higher education institutions changes quite significantly over time. Presidents, provosts, deans, department chairs, and heads of programs turn over fairly regularly. Fortunately, the boards of these institutions are relatively more stable and can provide some sense of stability over time. In addition to these boards, another tool for creating stability and continuity across leaders is a clearly stated strategy. This should guide the actions of the institution's leaders and inform all prospective leaders of what the organization stands for and what it hopes to accomplish.

Communication A clearly stated strategy communicates priorities and processes to those not only within the organization but outside it as well. Vendors can better understand how they might help. Prospective students can use the strategy to find a school that is the right match in which to enroll. Adjunct faculty and contract employees can more easily gain an understanding of what the institution stands for and how it hopes to succeed. In short, a strategy is an institution's stake in the ground that states "This is who we are, what we do, and how we hope to compete." It can help the institution attract the right people and organizations to it.

Simplify decision-making Finally, the bane of a decision maker's existence is a limitless set of possibilities. Such a horizonless landscape takes longer to comprehend and navigate successfully. It takes more resources (both

> time and money) as well. This is the life of a decision maker in an organization without a strategy. A strategy sets parameters around the choices available to an institutional leader at any level of the organization, thereby speeding up and simplifying the decision-making process. It also presents clear guidelines for what the organization wants the decision maker to emphasize and prioritize.

The benefits of a clearly stated strategy are clear. The next topic to address is at what organizational level a strategy should be created.

2.2 The benefits of having a strategy

A university can have a strategy, as can a school, a department, and a program. A school can set a strategy for its online programs. All of this is true, but the question remains: At what organizational level does creating a strategy have the most impact?

2.2.1 Top-level institutional leadership

In essence, the effectiveness of a strategy is up to the institution's top leadership. The strategy is usually set at the institution level, and it can be used to drive other strategies at unit levels (school, department, and program). The impact of this overarching strategy is determined by how its leaders enforce the strategy at those unit levels:

> Does the provost insist that all major budget requests be justified with "strategy support" statements, and then have a follow-up effectiveness report the next year? Do deans require annual plans (and, again, follow-up effectiveness reports) from heads of school programs that specify how the program will act and invest to support the strategy? Or, once the strategy is written, does it sit on the proverbial shelf without influence on anyone's decision-making?

The answers to these questions, and others like them, provide clues as to whether a higher education institution's top leadership are performing their duties, doing the hard work of ensuring that the institution's strategy remains a guiding light for everything from daily decisions to multiyear investment strategies.

Tactical decisions are those made at a level of specificity that is not directly addressed by a strategy. For example, what go-to-market plan for a program would be most effective? What information technology investments should be made to support students? Answers to these questions, and others like them, are almost always given at the unit level. This decision-making is simplified by having a strategy to set the boundaries of what is possible. For the go-to-market plan, the organizational strategy would have specified the general makeup of target prospects, the differentiating student experience of the institution as a whole, and other vital components. If the institution's strategy says that it serves low-income adult learners, then a program should not waste time or resources considering any plans that do not serve this audience.

2.2.2 No separate online learning strategy

This needs to be stated and emphasized:

> *A higher education institution should not have an online learning strategy that is somehow separate in tone, content, or direction from the institution's overarching strategy.*

A couple of points justify this statement: First, the higher education online learning market is not separate from the overall market for learning. Institutions do not get to make the decision to separate the two; vendors do not get to make this decision. *Prospective students* make this decision, deciding among a choice of face-to-face degree programs, online degree programs, blended degree programs, and certificate programs of all types (as well as others not listed here). Given that a prospective student cross-shops outside of the set of strictly online learning programs, the broad market for learning must be considered as one market; the institution should not operate as if online learning is some separate endeavor that happens to be carried out under the same roof.

Second, an online program will have a better chance for long-term success the more it explicitly supports and operates in line with that institution's strategy. These programs should not be rogue operators with different value propositions, differentiators, and target markets than those specified by the institutional strategy. Certainly, early online learning efforts at an institution can be operated as skunkworks efforts, separate from the main decision-making body of the institution, so that leaders can accelerate and simplify decision-making around that effort. (Online or hybrid noncredit certificate programs within a university or school that is new to online learning that possibly use a new pedagogy are prime targets for a skunkworks-type organization.) However, the decision to separate the effort into a skunkworks should

be made explicitly by the institution's leaders with the knowledge that the effort will be folded back into the institution (along with all the lessons learned by that effort) when the experiment has been completed. In any event, online learning programs are simply learning programs with a different delivery media and are not deserving of some special operating space outside the scope of the institution's broadscale strategy.

2.2.3 Unit-level strategies

Back to the statements at the beginning of this section:

> *A university can have a strategy, as can a school, a department, and a program. A school can set a strategy for its online programs.*

I have made the case that a university should have a strategy. I hope that much is clear. But I would also say that the school, department, and program (online or not) should also have strategies. (Figure 2.1 shows a generic organizational structure for a higher education institution.) However, these strategies make the most sense and are the easiest to specify when they are created under and in alignment with the strategy of the whole institution. Problems can and will arise when unit-level strategies are put in place either 1) in the absence of an institutional strategy, or 2) in conflict with an existing institutional strategy. It is also the case that unit-level strategies can be necessary in the face of purposefully incomplete higher-level strategies. Below, I discuss each of the problems in turn, and then present my recommendations for how to proceed.

Absence of an institutional strategy

The problems raised by the absence of an institutional strategy are manifold.

- Any unit strategy that is created may eventually **conflict with a new institutional strategy** (see the following subsection for the problems with this).
- A unit strategy may **conflict with the strategies of other units**, thus limiting the effectiveness of any of their strategies taken alone; further, there is no explicit and defensible higher authority at the institutional level (other than that influenced by the vagaries of politics) that could adjudicate between any conflict among the units.

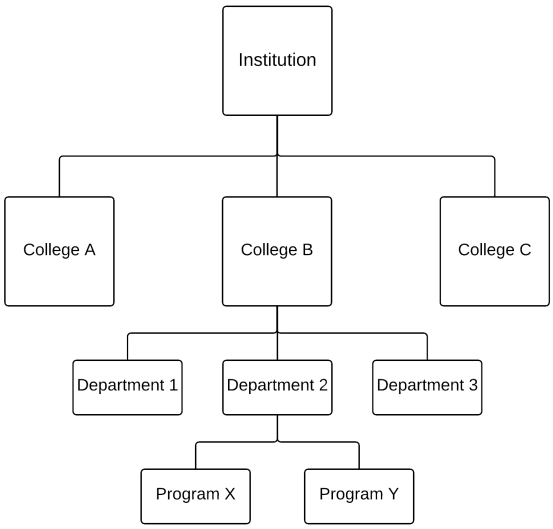

Figure 2.1: Generic higher education organizational chart

- The absence of a higher strategy **makes the decision-making process at the unit level more complicated** (as described in §2.1).
- The absence of an institutional strategy makes it easier for a new dean at a school or new faculty head of a department to implement a new strategy that **conflicts with existing programs** at the university since there is no guidance from above.
- Finally, the absence of an institutional strategy **makes it harder to justify asking the central administration for support** for the unit (e.g., funds, personnel, and cross-institution cooperation).

Operating within such an institution would be complicated and carry great long-term inefficiencies and risks.

Conflict with an existing institutional strategy

This problem seems to have more direct, day-to-day costs than those mentioned above. A unit strategy that conflicts with an existing institutional strategy creates these obstacles:

- The unit **minimizes its own effectiveness** by raising confusion in the market, with prospects, and with others who are aware of the discrepancy. An institution wants its programs to present a unified face and deliver a unified message to the market so that its overall brand is strengthened by its individual programs rather than muddled.
- It is **hard to justify support** for the unit from the institution. If a program or effort is small, then a dean (for example) does not necessarily have to get resources or other support from the central administration; however, once the effort grows larger, the unit will probably need support from the central administration, which would more than likely withhold resources since the unit is working in conflict with the institution.
- A conflicting unit strategy **makes it more difficult for new leadership in the unit to know how to proceed** (or to proceed at all). A new leader joining a unit with such a strategy has to proceed cautiously, learning the certainly complicated history of the unit and its relationship with the central administration. Relationships between the central administration and the unit are likely to be frayed, and any efforts to align the unit strategy with the institutional strategy must be approached with caution within both the unit and the central administration.

The success of such a unit would be limited by a threshold imposed by each of the above issues. In order to remove the threshold, the conflict between strategies would have to be resolved, probably through a long-term effort that would distract leadership from other pressing problems. I would encourage any leaders to undertake that effort. Succeeding is hard enough without working against central administration.

Incomplete specification

Let's remind ourselves of our working definition of strategy:

> A strategy is a statement describing where the organization is going to compete, how it is going to compete, how it is going to win, why it will win, and the steps that it will take to achieve success.

Here I will assume that the university has gone through the process of defining its overarching strategy before *the program* begins defining its particular strategy. However, in this case the university has provided recommendations or defaults for various facets of the strategy and has left it up to program leadership to determine how it might refine or revise a particular facet. This would be a reasonable approach for a large, diverse university to take because

the quality, history, and competitive position of all of its programs are bound to range widely.

When the institution originally defines its strategy, it can provide guidance for the unit and program strategies that might be created under its influence, or it can simply leave the facet blank. When providing defaults, institutional leadership should also explain the rationale for those defaults and how or why units might depart from them. Once the structure is in place, institutional leadership must determine how it will be enforced. The following are requests that institutional leadership might make of units:

- **Submit a revised strategy and meet with an oversight committee** Unit leadership should go through the process of writing their strategy, showing how and explaining why it differs from the overarching institutional strategy, and then meet with the institution's oversight committee to determine how to proceed. A possible policy might be to enter into ongoing consultation to align the unit — with the understanding that university resources (e.g., funding, computing resources, instructional design personnel) would be withheld unless the unit complied. The institution could also decide to make exceptions or provide limited support while the unit is noncompliant.

- **Submit a revised strategy and document how it differs from the recommended strategy** This option starts the same way as the previous but differs in that there is no belief that the institution would react, punitively or otherwise, upon the submission of the strategy. The university leadership might meet with unit leadership to obtain deeper understanding of its reasoning or to attempt to persuade the unit to comply, but that would be the extent of its reaction.

- **Submit annual reports on the portfolio of programs and how their strategies differ from the top-level strategy** This option is chosen when the institution is looking to stay informed of the actions of its relatively independent units. The institution might use the information as part of a learning process so that it can stay up-to-date on its portfolio of programs and gain insight into which ones are successful in the market and why. It could also use this information as input into a periodic strategy revision process.

One other choice is to simply write the strategy and not ask for any compliance information. Certainly, this is only marginally better than writing no strategy

at all, but in some institutions it could be seen as the only way forward, a small step toward bringing the units into an ongoing conversation.

Recommended process for defining a strategy

The ideal process for strategy definition starts at the institutional level. After a broadscale institutional strategy is defined, the schools define (or refine) their individual strategies, and then the programs follow suit. Different institutions might leave different facets of their strategies undefined (or with a default value defined), but the coherence of strategies across units makes it easier for the programs to get their messages to the market successfully (and with less expense).

However, we don't live in an ideal world, and the process of defining a strategy will often depart from the above description. This is where the perfect can be the enemy of the good. Let's discuss several different scenarios for the launch of an online program:

No strategy for either the institution or the school If this is the case, it would almost assuredly take too long for both the institution and the school to define their strategies before a strategy must be set for the program. (Defining a strategy can easily take 18–24 months in an institution as complex as a university.) The next-best solution might be to define the program's strategy in coordination with the dean (i.e., head of the school) so that the program's strategy can at least take into account what the school strategy might become. The dean could then use this process as a way to kick-start strategy definition at the school (and, possibly, the university) level.

No strategy for the institution but strategy for the school This is a fairly straightforward situation. The dean has a problem, but the program head does not. The program head should create the program's strategy in alignment with the school strategy. The dean (and the institution leader) has a problem — no guiding institutional strategy as the school continues to build out additional programs (such as the current ones). The more programs the school creates, the more the school is committed to its existing strategy. The more it is committed to its strategy, the more difficult it would be to change its strategy if the university ever defined a noncompliant strategy. The best that the dean can do is to use the school's experience with its current strategy as input into the creation of the institution's strategy and hope that the school

(and its programs) are in compliance with the newly created controlling strategy.

Strategy for the institution but no strategy for the school
Program leadership should define its strategy in compliance with the overarching institutional strategy. In addition, leadership should collaborate with the dean so that he/she can coordinate with institutional leadership. The dean should then take this opportunity to begin thinking about defining the school's strategy. The dean could choose to be deeply involved in defining the strategy for the program or could simply choose to receive periodic reports during the process.

A problematic controlling strategy Suppose that the school's strategy (or the institution's if the school does not have one) is seen as inappropriate for the program by the program's leadership. The school's strategy conflicts with how program leadership wants to proceed. This is a significant red flag, and all work on planning and investing in the program *should stop immediately while conflict resolution proceeds*. Program leadership should commence with intensive meetings, discussions, and negotiations with school leadership (including the dean, faculty leadership, and staff leadership — especially finance and marketing) in order to resolve the conflict. Program success is difficult even with full school support and agreement between school messaging and program messaging in the market; such a conflict between strategies would certainly reduce school support and increase confusion in the marketplace, both raising the cost of getting the message out and reducing the chances for success. The conflict might be resolved in one of the following ways:

- **Revise the program strategy to be in compliance**. The most direct way to align conflicting strategies is to revise the program's strategy.
- **Revise the school's strategy to fit the program's strategy**. Perhaps the school's strategy is out-of-date and the launch of the new program will force the school to address this. Of course, once the school revises its strategy, other programs within the school should also ensure that they are in compliance (likely over a period of years).
- **Complete the specification of the school's strategy**. It might also be the case that a school's strategy is in agreement, to the extent that it has been specified, but that several facets needed to

complete the strategy (as laid out in §5) are unknown. Program leadership should reach out to school leadership and urge the formation of a committee to complete the strategy definition.

- **Add some flexibility to the school's strategy**. Finally, it's possible that the school's strategy is overly limiting. For example, in specifying where the institution is going to compete (one of the components in our provisional definition of a strategy), the institution might have specified a narrow geographical area as the only location for target prospects. Flexibility might be added by 1) allowing a target-location specification at the program level as long as it also includes the institution's overarching target prospects, or 2) specifying target locations at the institution level that are variable rather than global (e.g., location X and Y for adult-focused degree programs, location X and Z for undergraduate programs, and location X, Y, and Z for adult-focused non-degree programs.

In the above I focus on the process for defining a *program* strategy. Similar problems arise in defining a school strategy, a research center strategy, or any unit strategy that falls under the auspices of a larger institution. In order to conserve space (in this already long discourse), I assume that the reader can make the necessary translations from defining program-level strategy to defining the appropriate unit-level strategy for your needs.

2.3 Summary

In summary, I recommend that your institution create, if it has not done so already, its comprehensive strategy. This strategy should be implemented with processes and procedures to reinforce its magnitude at each operating unit (e.g., colleges, departments, and programs). Each of those units should then use the institutional strategy as the guidepost for creating its own strategy in a way that maximizes alignment between the two. Unfortunately, programs rarely operate within such an optimal environment; thus, the above tactics should help leaders navigate suboptimal strategic terrains.

In the rest of this paper, I periodically refer to program strategies. The reader should understand this in the context of §2.2. This program strategy should be in compliance with the institutional strategy (in the best case) or differ from it in controlled and well-understood ways. I speak of program strategy because this is the granular level where actions are taken that bring the strategy to life.

Chapter 3

Defining a generic strategy

In the previous chapter, I make the case for a higher education institution's need to create a strategy. In this section, I will introduce a widely cited strategic theory, with the goal of establishing a vocabulary for talking about strategy. Further, as you become familiar with this theory, you should gain some analytical tools for examining an institution's brand and programs from the market's perspective.

In Michael Porter's seminal works of the early 1980s — *Competitive Strategy* and *Competitive Advantage* — he developed, among other things, the concept of generic competitive strategies. Since that time, his terms have defined how executives, analysts, and consultants think about strategy. Certainly, much work has been done since then that extends his ideas, but a good place to start building an understanding of strategy is with a quick look at his work. In this section I use the term "institution" because it's more appropriate here, even though Porter refers to a "business."

3.1 Porter's approach to generic strategies

Porter started with the insight that an institution will either focus on **cost leadership** (provide value for less) or (provide a distinct value). Under both of these strategies, the institution is trying to reach the whole market. Porter also proposed that an institution could alternatively have a *focus strategy*, by which it sells products or services to a defined niche of the market. When undertaking this niche strategy, the institution can have either a **cost focus** or a **differentiation focus**. The only difference between the two sets of

strategies relates to the size of the market being addressed; the first pair addresses the whole market while the second pair addresses some subset of it.

Note that while perfect examples of institutions that follow these strategies are difficult to identify in the market, the tactics that support each of these strategies are important to understand.

Let's look at each strategy in turn.

3.1.1 Cost leadership

An institution taking a cost leadership approach will focus its efforts on ensuring that it charges lower prices than competitors for equivalent services. It will not focus on providing superior student services or on just reaching a part of the market. It will focus its efforts on reducing its costs so that it can sell its programs to the whole market for lower prices.

A significant problem for higher education institutions is that the tenure system, combined with the high cost structure of many colleges (e.g., large fixed and indirect costs that are not associated with the delivery of any particular program but that must be paid for with tuition and fees from students enrolled in the institution's programs), contributes to the difficulty of achieving sustainable cost leadership, whether within the higher education ecosystem or, especially, with providers outside higher education. The following discussion relates tactics for lowering costs that are certainly appropriate and might help specific institutions achieve profitability at lower enrollment levels than otherwise possible. However, broadening one's vision to include possible non-degree higher education programs or non-higher education providers makes it difficult to conceive of a situation in which an institution's degree programs might be a cost leader. The desire to lower costs has led many institutions to rely heavily on lower-paid adjunct faculty. The competitive and long-term costs of such a move are certainly debatable; this option must be considered carefully because its effects are wide-ranging.

Researchers have proposed some standard approaches to lowering costs, including technology as a substitute for labor, economies of scale, strict per-student cost cutting, efficiency and capacity utilization, and high productivity. Below I discuss each in turn.

Technology as a substitute for labor

If an organization can make a fixed, up-front investment in technology that can substitute for the ongoing marginal cost of labor, often this can lower overall costs while simultaneously enabling expansion. This is a particularly attrac-

tive option for online learning in higher education because faculty salaries (and, in general, salaries for all personnel) are always going to be the greatest component of costs for a traditional face-to-face program.

Economies of scale

Economies of scale occur when per-unit (per-student) costs drop as production volume (or enrollment) increases. Consider this simple cost equation for an institution:

$$\texttt{Total costs} = \frac{\texttt{Variable cost}}{\texttt{Student}} \times \texttt{Student} \tag{3.1}$$

This makes sense; total costs are made up of total fixed costs plus total variable costs. Total variable cost comprises the variable cost per student multiplied by the number of students. The idea behind this equation is that the fixed costs are set before a program begins and the per-student cost (`Variable cost`/`Student`) is also set — the only input variable that might change is the number of students (`Student`) Any increase in the number of students would increase the total costs of the program. All of this is unexceptional. In order to make this applicable to per-student costs, let's divide both sides of the equation by

$$\frac{\texttt{Total costs}}{\texttt{Student}} = \frac{\texttt{Fixed costs}}{\texttt{Student}} + \frac{\texttt{Variable cost}}{\texttt{Student}} \tag{3.2}$$

Think about economies of scale in terms of this equation and what it says about the total costs per student (the left side of the equation) as student enrollment increases (i.e., as the value of `Student` increases):

- The `Fixed cost`/`Student` term will get smaller, sometimes significantly smaller.
- The `Variable cost`/`Student` will not change since it was assumed to be set before we started the analysis. (Yes, it's kind of ironic that the variable cost per student is fixed and the fixed cost per student is variable. It does make sense, but there is definitely a degree of irony here.)

Thus, what we can see here is that the `Fixedcosts`/`Student` term on the right would get relatively smaller as enrollment increases. If enrollment were to go up by a factor of 10, then this term would be one-tenth of its prior value. This is the power of scale — that is, the economies of scale — in online

learning: The fixed costs of the program become spread over more students, thus lowering the total cost per student.

This benefit of economy of scale is usually accrued when the major cost components are fixed, up-front expenses rather than variable, per-student expenses. The following are some of the ways that an institution might reap the benefits of economy of scale:

- **Lower indirect costs**: Indirect costs, a type of fixed costs, for online learning are costs that are needed to operate the organization as a whole and that cannot be applied to a specific offering of a specific course.
  - Reducing administrative salaries, the amount spent on student services, the amount spent on technology, and so on. This might also involve not using instructional designers to create courses and not providing student services to online students.
  - Reusing a specific course for a longer period of time so that more students go through the same course. Note that the cost of creating a course is an *indirect* cost because it does not vary *per student*, it varies *per course*. As enrollments go up, the cost of creating the course does not change.
- **Change variable direct costs into fixed indirect costs**: An institution might invest in automated grading tools, build its own educational technology rather than use a commercial tool that carries a per-student fee, or design a course so that running a cohort through it does not require much faculty participation.
- **Increase the number of students who go through a program**: This can be achieved by teaching larger course sections or teaching more sections of those courses. It is not a given that simply increasing the number of students who go through a program will achieve economy of scale. A significant portion of the overall cost of the program must be fixed, or achieving scale would not provide economy. Also, consider these two options:
  - **Teaching larger sections**: If the program tries this but uses a pedagogy that requires much student contact, then the faculty will likely revolt.
  - **Teaching more sections**: If the program tries this while requiring much (variable cost) manpower per section, then economy of scale will not be achieved.

Each of the above options helps the institution achieve economies of scale, but this says nothing about the quality of learning or the appropriateness of the decision for a particular institution.

Strict per-student cost-cutting

The focus here is the reduction of the variable, per-student costs — that is, `Variable cost/Student`. Low direct costs can be achieved through lower wages for faculty and staff, using already available college-wide technology instead of adopting or creating a new technology, and by reusing existing learning materials from other programs. The appropriateness of these steps is not for discussion here; certainly, it is entirely possible that taking these steps would decrease the quality of the institution's programs — it might also be neutral or positive. It would be up to each institution to do an analysis and act fittingly for the specific step it takes. However, in general, when faculty see these types of efforts, care will have to be taken by institution leadership in communicating the reasoning behind the choices.

Efficiency and capacity utilization

A more effective way of pursuing economies of scale is through capacity utilization. Capacity utilization refers to the extent to which an institution's employee's capacity to do work is being used to create and run programs:

> Are the employees being used to the best of their abilities? Are they working on programs for a high percentage of their week? Or are they being asked to work on tasks that do not take advantage of their skills? Or are they not being kept busy during the week?

We speak of *efficient usage of employees* if a high percentage of their work weeks are being spent on high-value tasks rather than on idle time or low-value tasks. This efficiency is generally the result of good management practices, good organizational design, and sufficient staffing levels across the organization.

The most obvious example of efficiency in online learning (versus face-to-face learning) is to reuse already-developed courses as often as possible. The big investment is the creation of the online course itself; a course sitting on a virtual shelf is a resource that is going unused. Investment in a custom learning experience platform to support an institution's distinctive pedagogy or community building is another example of an investment that can be leveraged with capacity utilization. Once the investment is made, the institution

should do everything it can to apply the platform to all of its online programs. The development of the software to build on the institution's distinctive approach can not be easily copied at another institution, and adding students to the software will have little impact on the ongoing direct costs for the program.

High productivity

High productivity of faculty or staff means that relatively more outputs (graduating students) can be achieved with relatively smaller inputs (dollars and/or faculty and/or staff members). This is another step that should be addressed carefully, balancing against effects on quality and overall student success. While high productivity (in the sense addressed here) might be a goal, institutional leadership must continually think about the experience of faculty and students in the course. Any gains in productivity will probably come through iteration and experiments over time; it has been my observation that big changes are difficult to make in this arena because of the general resistance to change found in higher education. Small proposals for experiments that gather data to support decisions related to productivity are almost assuredly needed.

One possible measure of the productivity of a faculty member is the number of students per offering of a class. Another measure could be the number of sections of a course that a faculty member can lead per year. Typically, institutions going for cost leadership try to have quite large cohorts of incoming students so that they can have multiple sections of a single course with many students. The goal is to get more students through the course at the same time without having to allocate additional faculty or staff assistants to the course, thus improving the productivity of the faculty and reducing the overall cost per student. Building off of this, an institution can be going for high productivity with the choice of asynchronous (students viewing recorded content) over synchronous (students viewing live faculty) course designs. Synchronous course designs quite frequently, possibly always, are limited in size given the ineffectiveness of synchronous online learning with many learners — the technology simply isn't there to support the approach. In order to get large sections, an institution will have to stay away from synchronous course designs.

An institution has many different options for achieving a cost leadership position, but to do so it would likely have to focus on most, if not all, of them. With competition so high, it is not a simple matter to operate at a lower cost level, thereby enabling a lower price point. Instead, an institution will have

to focus on how it might provide a distinguishing value proposition. To that topic I turn now.

3.1.2 Differentiation

An institution taking a differentiation approach will focus its efforts on making its offerings more attractive than those of its competitors. Just as with the cost leadership strategy described above, these organizations are addressing the whole market. An institution using this strategy usually has recognizable branding backed by effective marketing. Its product or service is superior in one or more dimensions, and it's backed by associated research, development, and innovation.

The lack of either recognizable branding or an existing standout feature should not deter an institution from using this generic strategy. It would simply have to establish its brand in the marketplace (and clarify what it stands for), doing the work internally to improve the feature that it wants to use as its basis for differentiation. Or maybe the institution has an effective brand image, but it is based on some feature that does not map well to online learning (e.g., *physical location*). This does not mean that the institution should give up on this feature — access to local corporate partners could be a differentiator in the new online program just as "campus facilities and beauty" differentiated its face-to-face programs. In this case, the feature ("attractive to students in the local area") does not change, but the tactics for framing the benefit does. This is not always possible, but creativity can go a long way toward addressing seemingly insurmountable challenges.

Baseline knowledge

The general approach to pursuing a differentiation strategy involves understanding each of the following dimensions — target market, strengths and current standing, brand, and competition — and combining that knowledge into an actionable plan for creating a valuable differentiation in the market.

Target market An institution needs to understand the prospects it is pursuing in the market. It needs to understand what they desire in their education, what outcomes they are looking for, what type of experience they want, what emotional message they might respond to, and so on. Every bit of knowledge an institution can gather about its target market can be used to define a program attractive enough to prospects that they will enroll in it. Of course knowledge is expensive to gather and, at some point, an institution

has to make a decision; however, a basic understanding of an institution's target market is necessary before moving forward on any program. Without an adequate understanding, you are shooting blindly at a target that may or may not exist.

Strengths and current standing An institution needs to understand its own strengths and weaknesses relative to its competition. This is vital for determining which facets should be emphasized in its messaging to the market. It is also key to prioritizing: determining which facets need investment simply to bring them up to par, and which need investment in order to make them leading, differentiating factors.

Brand An institution's brand is a consolidation of what it stands for and what it means to students and the market as a whole. Maybe the brand is built on decades of experience in the face-to-face education market. Any goals the program has and any strategies the institution implements have to be formulated within the context of its current brand. The degree of market awareness (or lack thereof) of the brand has to influence the formulation of those goals and strategies. Further, the specifics of the brand itself make certain program goals and strategies easier or harder to achieve and implement. An institution needs to have (or acquire) a deep knowledge of its own brand before making any deep commitment to invest in its online programs. Having acquired that knowledge, it then needs to ensure that a program's goals and an institution's approach to online learning can work within that brand.

Any assumptions that an institution makes about its brand need to be particularly vetted against geography. Many higher education institutions have deep ties to their local communities and are well known in their geographical areas; the history of an institution can have a distinctly local flavor. Few institutions have brands with a national draw; even in the cases of those that do, it takes significant effort to maintain it over time. This information clearly spills over into the analysis of target market and competition.

Competition Finally, each of the above dimensions must be understood in direct relation to the institution's, school's, or program's competition. Find out: Who is the competition? What do they charge? What are their major features? The answers to these questions provide a context to understand its own program and how it is perceived by target prospects. It also provides the context for determining which of its own features need investment, and at what level.

In summary, knowledge of these dimensions can inform the institution's leadership as they make an actionable plan for designing and creating a program that provides a differentiated value proposition to prospects. The key is to focus on a differentiator that prospects would value and that would prove difficult for competitors to react to, copy, or defeat.

Appropriate situations

A differentiation strategy is appropriate to use in the following situations:

Non-price-sensitive market In a price-sensitive market, cost is a strong factor in determining a prospect's purchasing decision. In such a market, you would probably see a strong downward pressure on prices, since any additional increase would reduce the number of students who enroll in the program. An implication of this is that if a program is in a price-sensitive market, then it is difficult for its institution to justify investments in that program, since it is not going to be able to recoup those investments by raising prices (i.e., higher tuition). On the other hand, if it is not in a price-sensitive market, then a program can charge higher prices. But non-price-sensitivity does not mean that prices can be raised on a whim — the institution has to justify higher prices by providing more value. In a non-price-sensitive market, the choice for the institution becomes "How should we provide that value so as to capture more students and more tuition dollars?"

Competitive market If a program is in a competitive market (e.g., the market for online MBAs), then an institution cannot just offer a standard program. It cannot simply charge a low price, because the market already includes programs at a wide variety of price points. Further, a range of non-degree substitutes exists as well (executive education, local community college, MOOCs, books, etc.). The only real option here is to devise a way of differentiating the program from other offerings through some feature or (more likely) some set of features targeting a specific customer set.

Customers with specific underserved needs A market that has "customers with underserved needs" means that there are prospects in the market who would be willing to pay more for specific programs but that such programs do not exist. If a program with such services were to be offered, those prospects would flock to it.

I have observed a serious problem with many institutions: They go to market with a program designed to address the needs of a customer set (either

the whole market or a subset of the market), and either those needs are already being adequately met or there simply aren't enough customers with those needs to justify the program investment. It is likely that some powerful faculty or leader within the institution had an idea for a program based on his/her limited or biased knowledge of the market, and it turned out that the market simply didn't exist or could not be adequately exploited by the institution. Thus, the program ends up a failure, and all the time and money invested in it is wasted.

- The target customer set has to be *well defined*
- They have to be *well understood*
- They have to be *reachable in a cost-effective manner*
- They have to be *willing to pay* for the program at a price that can justify the institution's investment in it.

Without these four conditions, any differentiated program will fail to live up to expectations.

Unique resources that make it difficult to copy If an institution already has resources in place (e.g., a well-understood pedagogy; a method of supporting students; a uniquely supportive alumni group), then building technologies and offerings that take advantage of those resources would be a difficult-to-copy differentiating factor. The platform used by Harvard Business School Online that builds on their world-famous case teaching method is such a resource. It is not that these resources can't be copied, but the effort required to do so provides the originating institution time to secure and maintain its leadership position, enabling it to garner superior returns and/or enrollments.

In summary, when an institution is armed with the appropriate knowledge of the market, competition, and its own resources, and it applies a strategy of differentiation in a suitable situation, it should have confidence that prospects will receive the program positively and that it will have corresponding success in the market.

3.1.3 Focus

Finally, Porter proposed two focus strategies. Institutions using these strategies approach the market with the same choices as described above but do so within a subset of the market rather than the whole market. A generic **cost focus** strategy means that the company has chosen to use a cost leadership

Generic strategy Is the organization going to use a differentiation or cost leadership strategy?

- **Differentiation**: How will the organization define itself in a way that provides more value to the target market?
- **Cost leadership**: What tactics will the organization use to lower its cost of doing business so that it can then lower its price?

Target market What group of prospects is the organization addressing? Why would they choose this organization over others in the market?

Figure 3.1: Questions for defining a generic strategy as defined by Porter

strategy within a subset of the market. When this strategy can be observed, there are often lots of me-too competitors attempting to deliver programs that are *nearly* as good as other programs but cheaper.

A generic **differentiation focus** strategy means that the institution has chosen to deliver its program to some identified target cluster within the overall market. This target cluster must meaningfully differ from other clusters; further, the institution must be sure that their needs aren't already being met. When designing a program for that target cluster, the institution must appeal specifically to that group.

Everything described above about analysis (other than how the target market changes based on strategies of cost focus or differentiation focus) remains the same, so nothing more needs to be said here.

3.2 Hybrid generic strategies

The previous section focuses on the basics of Porter's generic competitive strategies. In this section I describe the concept of hybrid generic competitive strategies, an idea that Porter initially deemed bad but which eventually came to be understood as a good and even superior choice for competing and winning in a market. Porter was cautioning against a company taking half-steps toward reducing costs or differentiating; it can be too easy to take the safe steps but not the difficult (and possibly more effective) ones. However, when prospects are making decisions based on multiple criteria, and evalu-

ating trade-offs (as in a traditional multidimensional choice problem), it can be an effective strategy for a company to differentiate on some features and invest less on other, more minor features — what's known as a hybrid generic strategy.

When choosing how to compete, an organization, especially one in higher education, should use caution when focusing on price as a differentiator. This becomes clear when the focus is placed on institutional factors and dynamic market changes. Because of institutional reasons, it is not easy for a school to change its price for degree programs by any significant factor. So if a new competitor enters the market with a significantly lower price, targeting the same prospects, the school would have a hard time responding effectively. The opposite problem can also arise — if the program provides significantly superior benefits to prospects, it can essentially cut itself off from taking advantage of that value because of its inability to raise its price appropriately. The school almost *has* to take price as given for degree programs while simultaneously recognizing that there might be other non-degree programs in its competitive set. The school's own *non-degree* programs are the competitive weapons it can deploy in the portion of the market that has more price variability.

When choosing a hybrid strategy (or any other strategy), the most important step is to select one or more target clusters of prospects and learn about them deeply. You need to know as much as you can about their value profiles; that is, the relative values they place on different features. For which ones do they merely care about reaching a satisfactory level, and which ones do they not care about at all? This will highlight a set of features that the institution needs to focus on improving. Determining the order and magnitude of improvement efforts is complex and is influenced by the institution's relative position, skills, knowledge, and personnel, as well as the existence of any obstacles to change within the institution.

3.3 Summary

This section provided an introduction to Michael Porter's generic strategies. I introduced vocabulary related to strategic analysis along the way.

The reader should now be familiar with the two basic ways an institution can approach the market — through cost leadership or differentiation — as well as the fundamental decision regarding which segment of the target market the institution will pursue. In the next section, I introduce a model that builds on generic strategies in a way that provides direct guidance to decision makers while streamlining the analysis.

Chapter 4

Generalized Differentiation Model

I have made the case for why a higher education institution needs a strategy. Then I introduced some foundational work by Michael Porter to drive home the importance of understanding an institution's competitive position within a market and, frankly, to underscore that market positioning should be paramount in any discussion of the design and launch of educational programs.

While Porter's generic competitive strategies are important and useful, further work can be done to provide guidance for the leader of an institution in relation to defining its generic strategy. Similarly, this advice applies to the leaders of a program who need to define its strategy (almost certainly within the context of the institution). In this section I define the Generalized Differentiation (GD) model and then highlight the insights it provides.

4.1 Purpose of this model

The GD model adds details to Porter's framework, and the end result is that it is easier to draw conclusions that drive a leader's decision-making related to an institution's strategy. After a leadership team completes the analysis for a program following the GD model, leaders will have established a language for talking about the program, agreed on the target clusters the program is attempting to reach, and defined the program features that will figure prominently in the institution's investment and marketing plans.

Note carefully that, similar to Porter's generic strategies, a GD strategy is not a fully specified strategy; I address such a strategy in section 5. A GD

strategy focuses on the prospect's decision, an intermediate step that is one piece of, but not the same thing as, the overall success that an organization hopes to achieve. This model merits time and space here because it emphasizes points that are important to the organization's eventual success as well as blind spots for many higher education institutions.

4.2 The model

The mathematical model is presented in detail in Appendix A. It uses the language of mathematics to ensure clarity; while true, this can also be an obstacle for comprehension. So I provide a general text description below; the interested reader should use the appendix for a more detailed description.

4.2.1 Overview

This model is structured around the prospect's decision to enroll at an institution. It is a maximization model in which a prospect chooses to enroll in a program that provides the maximum perceived value compared to all other organizations that he/she is considering.

The basic assumptions underlying the GD model are fairly unproblematic:

- Prospects choose a program based on features of the organization.
- The prospect is assumed to have imperfect information about the features of the organizations that he/she is considering.
- Prospects can be usefully grouped into clusters such that all of the prospects within a specific cluster value features in a similar way.
- Prospects choose the program that provides the most value among those organizations considered, and that value primarily comes from those features that the prospect both values the most and knows the most about.

Examples of features are cost, convenience of attending, quality of business school, quality of gym, quality of the institution's online programs, *U.S. News & World Report* ranking of the institution, etc. By including cost within the feature set, this model integrates the cost leadership generic strategy within the differentiation generic strategy; that is, Porter's cost leadership generic strategy is equivalent to a generalized differentiation strategy in which cost is one of the features that the institution focuses on. This change is based on the insights that prospects choose to attend institutions with varying comparative

price points, the relative price is just *one* of the dimensions considered, and the relative price is traded off against the relative scores of other features.

It is critically important that an institution include the appropriate features within this list. This knowledge can only come by getting familiar with target prospects and how they decide between programs. Including inappropriate features in this list could lead the institution to invest in a program that has no realistic chance of succeeding; the investment would raise the cost (and, probably, the price) of deploying the program while simultaneously failing to make it more attractive to prospects. It must be understood at the beginning that investing in a process to improve the program's knowledge of the target market should never end. Prospects and the market evolve over time, and both can change enough that what was once an attractive program can become one that is easily dismissed.

4.2.2 Related concepts

A program is assumed to have a limited budget to spend on features, so it must allocate this money effectively. It needs to guide its investments with its understanding of the features that target prospects value and how prospects make decisions. This raises three concepts that need further investigation: target prospects, decision rules, and value.

Target prospects

For all but the largest and most ambitious institutions, the program is not going to be designed for and marketed to the whole market. The program will focus on a subset of the market. It is generally assumed that prospects can be grouped into clusters such that all of the prospects within a specific cluster have relatively similar value profiles and minimal values across the set of features; that is, each prospect within a cluster mostly values the same features at the high end and the same features at the low end. Of course, this is not strictly true, but it helps us think about the market in a productive manner. Different organizations define different clusters and different numbers/sizes of clusters depending on how they think of the market.

This foundational integration of a program's chosen target market into the model removes Porter's two focus strategies from consideration; actually, other than having a different label, the analysis for whole-market strategies is the same as for focus strategies (just as it was with Porter's initial analysis). Further, since we have already seen that a cost leadership focus is just another

type of differentiation focus, this model is, at its core, an assertion of the following:

> *All strategies are differentiation strategies aimed at some particular target market.*

Decision rules

In order to simplify the discussion and analysis, I assume that prospects are rational, choosing the program that provides the prospect with the most value. Further, I assume that the prospect uses a satisficing-type rule. This means that the prospect has separated features into two groups:

Satisficed A prospect only mandates that a *satisficed* feature meets a minimum level of quality for the program to be included for consideration — that is, once the prospect is satisfied relative to that feature, then any further improvement of the feature would be irrelevant to the prospect. If it does not meet the minimum level, then that program would be ruled out. On the other hand, a program does not get credit for how much it exceeds the minimum level of quality for any satisficed feature.

Maximized Prospects want the *non-satisficed*, or what we'll call *maximized*, features of a program to be as high-quality as possible.

Value

I have used the term *value* without clarifying it; I'll address that now. Prospects are assumed to place a certain value on each feature. The prospect first chooses which features are satisficed and which are maximized. For the satisficed features, the prospect decides the minimum quality that is acceptable. The prospect disqualifies any programs in which the satisficed features do not meet the minimum requirement. Next, for all of the maximized features, the prospect allocates 100 value points across them all—think of allocating 100 percentage points—so that the more important features receive more points than others and the least important features receive the fewest. For example, suppose that prospect 4 has five maximized features when comparing programs. If V(4, 'library') = 0.05 (that is, assigning 5 value points to the library), then it can be inferred that a library is not important to this prospect.

I do not assume that prospects have perfect knowledge of all of the features of all programs under consideration. This is reflected separately by the

knowledge factor in the model. Knowledge can be thought of as the percentage awareness that a particular prospect has for a particular feature at a particular program; e.g., a 0.5 would reflect that a prospect thinks he/she is only partially knowledgeable about the quality of a specific feature of a particular program. Of course, it is probable (or even certain) that a prospect does not have a full understanding of what he/she knows; that is, it is not possible to know what one does not know. This means that decisions can be suboptimal. The institution has to work to minimize errors of this sort but cannot eliminate the possibility.

One of the jobs of marketing is to increase the knowledge of prospects within the program's target clusters related to the quality of features that are important to those prospects. This requires that the institution know the following:

- Who those prospects are,
- How they can be reached,
- The features that are maximized and those that are satisficed, and
- The relative value that the average prospect within that cluster places on the maximized features.

The program will never have perfect answers to all of these questions, but better information should lead to better decision-making (both by the prospects and by the institution).

4.3 Maximization goal

All of this leads to the following equation, which we're not going to be able to ignore, for the overall value that a prospect t places on program p:

$$O(t,p) = \mathrm{AP}(p,t) \sum_{i=1}^{n} ((1 - Q(t,i)) \times (F(p,i) - M(t,i)) \times L(t,p,i) \times V(t,i)) \tag{4.1}$$

Here is a simplified verbal form of that equation:

> The value that a prospect places on a program is equal to the total (across maximized features) of the quality of the feature times the prospect's knowledge of the feature times how much the prospect

- $\mathbf{AP}(\mathbf{p}, \mathbf{t})$: Only those programs for which the satisficed features have reached the minimum value are included in the analysis.
- $\mathbf{i} = \mathbf{1}...\mathbf{n}$: $\mathtt{i}$ is a specific feature among the $\mathtt{n}$ total features; thus, this is a summation over all possible features.
- $(\mathbf{1} - \mathbf{Q}(\mathbf{t}, \mathbf{i}))$: Since $\mathtt{Q}(\mathtt{t}, \mathtt{i})$ equals 0 for maximized features and 1 for satisficed features, then $1 - \mathtt{Q}(\mathtt{t}, \mathtt{i})$ equals 1 for the maximized features. By using this term instead of $\mathtt{Q}(\mathtt{t}, \mathtt{i})$, maximized features are included in the calculation and satisficed features are ignored.
- $(\mathbf{F}(\mathbf{p}, \mathbf{i}) - \mathbf{M}(\mathbf{t}, \mathbf{i}))$: This term specifies by how much a program's feature exceeds the prospect's minimum requirement for that feature (again, just for the maximized features). Increasing the feature quality would increase the overall value. This value can be negative if the feature is not good enough.
- $\mathbf{L}(\mathbf{t}, \mathbf{p}, \mathbf{i})$: The more the prospect knows about the feature, the greater the possible overall value. If the prospect does not know about the feature, then the quality of the feature, no matter how good or bad, would have no effect on the overall value. Similarly, if a prospect knows a lot about the maximized feature but the feature quality is less than the minimum required, then this shortcoming can have a large negative effect on the overall value.
- $\mathbf{V}(\mathbf{t}, \mathbf{i})$: This term specifies how much the prospect values the feature. The more the prospect values the feature, the bigger the impact on the overall value.

Figure 4.1: Explanation of the variables within the Generalized Differentiation equation

values that feature. Only those programs that exceed minimum requirements on satisficed features are even considered.

Thus, if a program wants to be chosen, then the program's leadership should focus on improving those features that prospects value the most, improving the knowledge of prospects about those features, and marketing a program to prospects who value its strengths. This figure walks the reader through this equation term by term and considers how each term affects the overall value that the prospect places on a particular program.

After determining the overall value for each program, the prospect then would choose the program with the greatest overall value.

4.4 Implications

4.4.1 Overall

The most important high-level takeaways from this model are as follows:

Target prospects

A program must have deep insights into its target prospects. It must understand as thoroughly as possible what features they *value deeply* and what features they simply want to be *good enough*. This knowledge would help the institution know where to focus their efforts at improving the program. It also helps the institution know which prospects to target and what message to convey to those prospects.

A word of warning: It can be seductively easy to use current students or alumni as a proxy for an institution's target prospects. This would significantly bias the data collection, since only prospects who elected to enroll would be included in the analysis. It would be quite useful to understand those prospects for whom the institution was a finalist in his/her decision process but who decided to go elsewhere: What factors were important to them? Which did they merely satisfice on? What institutions were they also considering? Gaining this knowledge would throw further light on which features the institution should be focusing on (for both investment and marketing efforts) since improvements would likely bring additional student enrollments.

Relative strengths

A program must understand its own strengths relative to its competitive set given its target customers. This understanding must penetrate to the feature

level at which prospects decide on one program over another. This knowledge guides leadership to determine where to invest (to improve those features that need to be improved) and how to market (to emphasize those features that are strong relative to other programs). Note that the competitive set is *not* determined by the institution; it is determined by the target prospects. They are the ones who determine which programs they are considering.

Differentiation

The program must ensure that it is better on some feature than its less-expensive competitors or it risks irrelevance; further, if it wants to charge more, then it should choose at least one feature on which it will be *markedly* better than its competitive set. The most likely candidates on which to differentiate are those features that prospects within the target cluster value highly. By improving the quality of the feature and by simultaneously increasing marketing efforts so that knowledge of the feature also increases, the overall value that prospects place on the program would increase, thus leading more prospects to enroll in the program.

Alignment

As described earlier, a program must simultaneously coordinate three major processes: *Marketing efforts* must align with the choices made during *program definition*, and both of these must align with *program investment*. A high-quality feature of a program only raises the overall value for a prospect if that prospect has deep and accurate knowledge of it. If the institution is not going to market around a feature or if target prospects don't care about that feature, then it shouldn't invest in that feature. Similarly, if a program doesn't have a high-quality feature, then the institution should not work at marketing it. Again, all of this depends on the institution understanding who its target prospects are and what features they value.

4.4.2 Increase enrollment

There are multiple ways to increase the number of prospects who choose to attend a program: 1) Increase the quality of highly valued features, 2) improve satisficed features up to the minimum level, 3) improve the knowledge of target prospects related to highly valued maximized features, 4) change the feature profiles of prospects, and 5) avoid dominant competitors. Let's look at each of these in turn.

Increase the scores on maximized features that are highly valued by target customers

This will pay off by increasing the overall value for the program, thereby increasing the chance that prospects will choose the program. Further, a program should spend on those features in the most effective ways; that is, for every dollar spent on a feature, the quality of that feature would rise more quickly than for other features for those people in its target cluster. The implication here is that if an institution cannot *efficiently* raise the quality of a feature, then it should consider hiring an outside firm who can or else work on raising the quality of another feature.

Increase the scores on satisficed features to the minimum level

This will increase the number of acceptable programs, thereby increasing the number of prospects who include the program in their consideration set. This, of course, requires that the institution knows both which features are satisficed and the minimum level required for such. An extensive knowledge of the features of competitor programs would help with setting the minimum level, but deep insight into target prospects is really what is needed here. The institution must ask prospects which features are their satisficing features (and, of course, which are their maximizing features) as well as the minimum required level for those features.

Increase target prospect knowledge of highly valued features

This will yield return by also increasing the overall value for the program, especially if some features are less well-known. This is a relatively easy way both to increase the number of prospects who choose to enroll in the program and to improve the prospect-program match by increasing the accuracy of the prospect's knowledge.

Manipulate prospect feature profiles

A program can try to change a prospect's value profile so that a particular prospect places more value on those features that the program scores well on and less value on those features that the program scores lower on. For the marketing team, this is both a more difficult and a longer-term play.

Stay away from dominant competitors

A program should, if possible, not choose to compete for a target cluster when the arena is dominated by another program (i.e., the other program is as good or better on every dimension). If a program feels it has to win by outmarketing another program — simply because it isn't actually as good as its competitor — this can be a losing and expensive proposition.

4.4.3 Increase profit

There are multiple ways to increase the total profit at a specific program: 1) Spend less on features that prospects do not value highly, 2) spend more on the highest-valued features and less on middle-valued features, and either or both of 3) increase tuition, and 4) increase enrollment.

Spend less on low-valued features

While it might make sense for other organizational reasons to spend money on particular features, when the majority of prospects place a low value on a feature, spending on it can be a money-losing gambit.

Match value profile

More generally, match the spending profile on features so that the institution works to increase the quality of highly valued features and spends less on the quality of low-value features.

Increase the program's tuition rate

This choice is usually not on the table, as the university sets something of a standard rate that can't be changed much. It might be possible to create a noncredit certificate, the price of which can more accurately reflect market demand while also using resources that have been created for the tuition-based program.

Increase enrollment

This is a hugely complex decision when the variance from a particular expected enrollment is considered. Increasing enrollment can be done in several ways: 1) Increase the number of students per section, 2) increase the number of sections, or 3) increase the number of entry cohorts per year. The first choice has implications for the types of pedagogies that can be deployed. The second

choice has implications for faculty staffing: Does the institution have sufficient staff to run the number of sections needed? The third choice also has faculty staffing implications — not only is the institution running the section multiple times (as in the second choice) but those are occurring at different times during the year, which would likely be less efficient for the faculty and support staff to carry off.

4.5 Summarizing the model

This section has covered a lot of ground and included many details. The following figure lists some of the main questions raised by the Generalized Differentiation model:

The following three descriptions summarize the model at different levels of detail:

Capsule summary All strategies are differentiation strategies aimed at some particular target market. (This is the basic insight that led to the name of the model.)

Basic summary Given a deep understanding of its target prospects, an institution should design a program, competitive with other programs in the market, so that it provides superior quality in those features that those prospects value the most, and then design and execute a marketing strategy such that it emphasizes those features to those prospects.

Expanded summary An institution should choose its target market (i.e., the target cluster of prospects) based upon the potential of maximizing the total profit contribution of the targeting program (by maximizing revenue relative to the cost of implementing and marketing the program). Upon choosing the target market, the institution can know (or can determine via market research) the value profiles of prospects within that cluster and the decision rule those prospects use to choose a program (i.e., which features are the required features). The institution should design and invest in the program so that it matches the value profile of the target cluster; that is, the program should be differentiated in response to what is known about the target market. The go-to-market strategy and marketing execution should be designed so as to increase the knowledge of prospects within the target cluster of high-value features of the program.

Features What are the strengths and weaknesses of the organization?

- Satisficed: Is the organization strong enough in these features so that it won't be eliminated from consideration by prospects in the target market because of them? If not, how can it become stronger in them?
- Maximized: How can the organization get stronger in these features? What is its comparative position in the market on each of these features? Which ones should it focus on?
- Mix: What is the relative emphasis among the features that form the organization's differentiation?

Target market What group of prospects is the organization addressing?

- Features: On what features does a typical prospect compare different organizations? Which ones are more or less important?
  - Satisficed: Which features just have to be "good enough" to make an acceptable program? At what level is "good enough" reached?
  - Maximized: Which features are so important that they increase in value as they increase in quality?

Marketing The organization must focus on marketing itself:

- Competition: Who is the organization competing against? What is their value proposition? How does the organization win against them?
- Knowledge: Are target prospects aware of the features of the organization? Do they understand how the organization's maximized features compare with the competition? Do they understand that the organization's satisficed features are good enough?
- Message: How will the organization's differentiation strategy (i.e., mix of features) be conveyed to target prospects?

Figure 4.2: Questions for defining a Generalized Differentiation strategy

I have now introduced the basic concepts of strategy using Porter's generic strategies and refined his concepts with my new Generalized Differentiation model. These are useful tools for focusing discussion at the early stages to drive agreement among institutional leaders regarding direction. However, as I have stated above, these are not complete strategy definitions. A fully specified strategy and its components are described in the following section.

Chapter 5

Full Strategy Specification

It is not enough to understand the implications of an institution's Generalized Differentiation model. Establishing an institution's fully specified competitive strategy requires answers to several additional sets of questions. Answering those questions will prepare an institution to undertake the tactical decision-making surrounding the implementation of courses and technologies related to a specific program. The process of analyzing with the GD model can be a good way to engage the appropriate set of leaders from faculty and staff without overwhelming them with details. However, that doesn't address the need to define a more fully fleshed-out strategy. Recall from the previous section that the discussion applies to all levels of an institution, from the top level to colleges, departments, and programs (online or not). For the most part, the following discussion focuses on program-level strategy with the assumption that the new program will be delivered online, but all of the insights can apply to any level of the institution and any type of program. Let's get on to the process of fully defining *competitive strategy*.

5.1 Overview

In 2001, professors Donald Hambrick and James Fredrickson introduced the "strategy diamond," a model for analyzing, integrating, summarizing, and communicating strategy at all levels, allowing decision-makers to accumulate and consider all the pieces of a strategy in combination rather than in isolation. Their framework is more of a checklist than a model, suggesting that good strategies begin by answering a series of related questions spanning several domains. Their concept was formulated for business, but here I've modified

it for use in the realm of higher education.

To reiterate: Understanding a program's Generalized Differentiation approach to success provides *the foundation* for fully specifying an institution's strategy. According to Hambrick and Fredrickson's framework, in order to *fully* specify its strategy, an institution also needs to answer the questions in the following figure.

The underlying reasons for putting together such a strategy were described in §2.1, but here's a recap:

Direction and priorities A strategy provides a statement of an institution's direction and priorities.

Alignment across the organization A strategy can guide the decision-making of people throughout the institution.

Continuity across leaders A strategy can create stability and continuity across leaders over time.

Communication A strategy can communicate priorities to people inside and outside of the institution.

Simplify decision-making A strategy limits the choices available to an institutional leader at any level of the organization, thereby speeding up and simplifying the decision-making process.

5.2 Details

Recognizing that all of the questions in the figure must be answered, in this section I explore the nuances of defining a strategy for an online program.

5.2.1 Arenas

Questions: Where will the institution be active, and what is the relative importance of each area? Answers here can be specific degree or non-degree programs (or related groups of the same), target clusters, geographical areas, underlying technologies, and pedagogies or learning experiences.

Details: The goal here is to choose where and how to compete. From the GD analysis, the institution has chosen a program and target clusters. In practice, these clusters also probably included the geographical areas to focus on. For online programs, these sometimes matter and sometimes don't.

Arenas Where will the institution be active, and what is the relative importance of each area? Answers here can be specific degree or non-degree programs (or related groups of the same), target clusters, geographical areas, underlying technologies, and pedagogies or learning experiences.

Vehicles How will the institution get there? Will it be through online program managers (OPMs), internal development, fee-for-service external vendors, joint ventures, licensing, or acquisition?

Differentiators How will the institution win? Will it be by image, customization, price, specific learning pedagogies, technologies (or combinations of technologies) that uniquely support the institution, community building, career services, etc.?

Staging What will be the speed and sequence of moves? Which programs will be built, and in what order? Will non-degree certificate programs roll out after the degree programs? What will be the rate of these moves? Will the focus be on one school at a time or rotate among several?

Economic logic Why and how will the institution obtain sufficient returns to undertake this effort? Will it be through scale advantages (either per program or investments that pay back across multiple programs) that are going to lead to lower costs? Will it be through premium prices due to a difficult-to-match learning experience (via technology, pedagogical approaches, community building, student service provision, etc.)? Will it be through superior marketing strategy and insights (and appropriate execution) that allow the institution to significantly affect the value profiles of prospects?

Figure 5.1: Questions for the five dimensions of the Hambrick & Fredrickson strategy model

Other programs

Additionally, after choosing one specific program to work on, the institution should think about other programs to focus on. Consider a few directions the institution might take:

Same discipline, related degree If a school has created a master's degree for accounting, a master's degree in finance would probably use many of the same core courses, reducing the production cost for the second degree.

Same discipline, related non-degree If a school has created a master's degree in transportation design, it could create certificates from extracts of the courses. Or it could retarget the content toward prospects with the goal of increasing applications. Similarly, it could retarget the content at alumni, aiming to increase engagement with the school. All of these options have the benefit of lower production costs thanks to the existing resources from the degree program.

Different discipline, unrelated degree At some institutions, cultural or business reasons might dictate that varying disciplines from around the institution create online degree programs as well. Some learnings can be shared across disciplines (depending on the amount of shared resources), but both the teaching faculty and faculty leadership will probably need significant guidance and support. Further, staff support might have to be hired and new technology (learning management system [LMS], pedagogical tech) might have to be established.

Different discipline, unrelated non-degree The same issues exist here as for the previous option, but the institution can implement a wider range of pedagogies and learning experiences than in a credit-bearing program.

Face-to-face programs Institutions also have opportunities to develop or adapt online resources for use in or support of face-to-face programs.

Every institution has a different situation and mix of existing and possible programs, so every institution's set of options will differ. However, getting a fuller picture of the options that are available to the institution will directly pay off with a plan that can be less expensive, bring in more revenue, and present the institution in a more favorable light in the marketplace.

Technologies

Choosing to compete via technologies is tied to organizational capabilities as well as other strategic decisions. An institution should only choose to compete based on technology if it has either 1) unique access to that technology or 2) access to resources for creating that technology. It must also have the commitment to the development and ongoing evolution of the technology in order to maintain its relevance and competitive position. That *access to resources* could refer to internal personnel or contracted third-party vendors (or personnel) under the guidance of sufficiently senior leadership. It would be nearly impossible to use commercial software as a basis for differentiation; this could only work if the software unlocks access to some unique internal resource.

In some cases, a technological tool can be valuable not through the ability to create the software but the institution's willingness to make the investment. The software might be complex or nuanced enough that it would take a significant investment to create it. Building this software and then improving it over time can provide a defensible point of differentiation in the market.

Pedagogies and learning experiences

Choosing to compete with pedagogies and learning experiences (possibly known in marketing brochures as "the student experience") is almost certainly tied directly to an institution's history in face-to-face programs. If an institution is well-known for using a specific pedagogy (e.g., case-based, project-based, or community-based), then it would make sense to choose to compete based on this. The institution already has the insights and abilities to deploy its pedagogy in the face-to-face world; what remains is to determine how to transition the pedagogy into the online world.

Similarly, if an institution has a history of providing a specific type of student experience (e.g., service-oriented, entrepreneurship, cultural immersion) for students in its face-to-face programs, then using that feature as a point of emphasis in competition also would make sense. Again, the question is how to provide the learning experience online.

Keep in mind that the lack of such a foundation in either case should not bar an institution from competing in either of these ways. Online learning is still very early in its evolution, and both online pedagogies and student experiences are continually developing in significant ways. It is not as if these have been chosen, staked out, and claimed by various competitors. So much is changing that new competitors could — not easily, but still could — choose to compete with some pedagogy and/or learning experience and the software

systems to support it. But it would take a significant and ongoing commitment by leadership.

5.2.2 Vehicles

Questions: How will the institution get there? Will it be through online program managers (OPMs), internal development, fee-for-service external vendors, joint ventures, licensing, or acquisition?

Details: The goal here is to address the organizational structure that the institution will use to meet its goals. The choices are varied and are foundational to the rest of the decisions.

OPMs

Much has been written about OPMs (including by me) so I will not repeat that here; however, this is almost certainly the first basic decision that an institution will make when thinking about going online.

Internal development and fee-for-service vendors

Using internal resources and using fee-for-service vendors are usually seen as two separate options, but they are actually complementary pieces of the same approach. If an institution wants to use internal resources to design, build, run, and maintain a program, it is unlikely to have all the necessary resources right from the start. Fee-for-service vendors can fill in those missing pieces. This avenue can also lower the cost (and/or raise the quality) of a program in a way that wouldn't be available to the institution if it tried to do all of the work internally.

Joint ventures

For many decades institutions have cooperated in offering joint degrees. The complexity of both tuition transfer and the sequencing of courses means that these joint degrees are limited. Offering the courses online shouldn't, in theory, reduce the number of joint degrees, but they haven't made much of a mark yet.

One long-term, significant play in the market would be for multiple institutions (similar though not competitive) to invest in a technology platform that plays to all of their strengths. (This is similar to the free, community-sourced, educational software platform Sakai but goes further in cooperation.) The institutions could also share some of the development of introductory courses,

minimizing any overlap of investment and giving each institution access to the platform that would otherwise be out of reach. It would also allow them to invest in the courses and programs that truly differentiate each institution from others.

Licensing

Another approach that can be used is to license content or technology. The institution can actually choose to play on either side of this exchange. Just as Harvard Business School writes cases for other institutions to use in their courses, an institution could create online content for use by other institutions. The MIT Center for Real Estate created both an online case management tool and cases for that tool that can be used by both MIT faculty and faculty from other institutions. Further, the concept allows faculty from *other* institutions to create cases for that platform.

The more common licensing position is for an institution to use content or technology provided by others. This is clearly an approach aiming for cost leadership or being taken as part of a satisficing tactic, since it is explicitly based on someone else's work. The savings accrued by taking this approach could be spent on some other feature, enabling the institution to differentiate itself that way, but by itself the licensing approach would not result in a winning competitive position in content or technology.

Acquisition

This is the most extreme and difficult to pull off of all of these choices. It's also often the result of an existential crisis that could not be avoided. The acquisition of one school by another is not unheard of, but neither is it common; however, it has occurred more frequently in the past few years — Wheelock College, Kaplan University, Shimer College, Daniel Webster College, and others were all acquired recently. This is likely a combination of changing demographics and the rise of online learning (and its associated challenges).

When acquiring a college, the acquiring institution must see a strong strategic fit, financial benefit, and an ability to merge (or otherwise manage) the acquired resources (students, faculty, staff, campus, brand, etc.). This complexity will be layered upon the usual complexity of running an institution, so it should only be undertaken when the acquiring institution is on solid financial ground, with secure leadership and strong relations between the board and that leadership.

5.2.3 Differentiators

Questions: How will the institution win? Will it be by image, customization, price, specific learning pedagogies, technologies (or combinations of technologies) that uniquely support the institution, community building, career services, etc.?

Details: The GD competitive strategy certainly began to address this issue, and it provides a foundation for thinking about the questions. Here I will focus on some of the ways an institution can differentiate itself. It must be emphasized that *the institution has to understand customers in its target market deeply* in order for any differentiation strategies to have a chance of success.

Learning pedagogies

If an institution has a pedagogy that is effective and well understood by its faculty, then it can be used as a point of differentiation. The institution will have to determine how it can effectively communicate the pedagogy to its target audience. It will also have to be persuasive about its relative effectiveness. Prospects are bound to be skeptical about the supposed effectiveness of some educational approach they have never experienced. Perhaps a "try before you buy" marketing approach would make the most sense in this instance.

Community-building support

This facet of online education has not received the attention and, therefore, investment dollars that learning pedagogies have received. Given that, the field is wide open and opportunities for differentiating are abundant. What tools, personnel, and processes are needed for a program to differentiate itself based on the ability to build community among students and/or faculty, alumni, and community?

Academic mentorship/student support

Another way to differentiate a program is through the student support services that it provides. A wide range of options exists here, including preparatory courses, peer mentoring, professional academic advising, tutoring services, online study guides...the list goes on. An institution should investigate the problems that students have encountered in its on-campus programs as a first step. How are their concerns addressed? Further, would it be possible to build an approach that would help both online and on-campus students? As

with differentiating through pedagogy, an institution must determine how to effectively communicate the benefits of its student support services to target prospects. If they don't choose a program based on this feature, then there's no reason to market it to them. It doesn't mean that there's no reason to build it; it's simply that the benefits might be measured by another metric (e.g., higher retention rates).

Career support

Providing career support is another way to differentiate a program, and it can have multiple other benefits. An institution might build a set of technologies, processes, and academic service staff that supports a wide and deep connection with interested companies. The value provided to those companies then makes it easier for them to learn about, work with, and hire students. Further, the connection allows faculty to invite professionals from the companies into their classes as well as use data from the companies in their research. This would clearly be an investment worth making, almost no matter the cost, but it would likely be significant and take many years, which is why there have been no clear winners here yet. The investment would have to be meaningful in all dimensions of the solution (i.e., technology, processes, and staff). It would take so long to implement that it would likely span multiple institution presidents; the board would certainly have to be involved.

Finally, don't forget that none of the above differentiation choices can be effective if target prospects don't know about the feature, if they don't value the feature, or if the feature doesn't meet their expectations. The basis for all decisions has to be profound knowledge of the target prospects.

5.2.4 Staging

Questions: What will be the speed and sequence of moves? Which programs will be built, and in what order? Will non-degree certificate programs roll out after the degree programs? What will be the rate of these moves? Will the focus be on one school at a time or rotate among several?

Details: The discussion of *Other programs* in §5.2.1 provides a general structure for the additional programs an institution might consider creating. Once leadership has settled on a preliminary list, the work really has just begun. Now leadership has to decide the speed and sequence of the deployment of those programs. Every institution and situation is different, but an institution should start slowly if it has not created online programs before. It is not implausible to work on developing a single program for more than a year

before the first learner even entered the program. This is one of those tasks that institutions always seem to underestimate. It takes focused effort from various professionals across the institution, and they all already have full-time jobs.

After the first online program in an institution is created, the burden on leadership will abate, but it will shift to department chairs and faculty. If a single school creates, runs, and launches multiple online programs to complement existing face-to-face programs, the faculty will face numerous new and different demands on their schedules. It will take some time for department chairs and deans to understand what the faculty have the capacity to handle and to then hire the appropriate number of faculty and/or assistants needed to run the programs. Running an institution with numerous and varied face-to-face *and* online programs is significantly more complicated than managing one with only face-to-face programs. For these reasons, an institution should launch no more than one degree program per year (within one school) at the outset. Even when the school is working on smaller certificate programs, it should not start more than one per year at the beginning.

5.2.5 Economic logic

Questions: Why and how will the institution obtain sufficient returns to undertake this effort? Will it be through scale advantages (either per program or investments that pay back across multiple programs) that are going to lead to lower costs? Will it be through premium prices due to a difficult-to-match learning experience (via technology, pedagogical approaches, community building, student service provision, etc.)? Will it be through superior marketing strategy and insights (and appropriate execution) that allow the institution to significantly affect the value profiles of prospects?

Details: This is both the hardest set of questions to answer and the one with the least direct impact on the strategy *other than suggesting that the effort to deploy a program may, sooner or later, fail.* Clearly, given the importance of forecasting the chances of failure, the difficulty of the task must be accepted and the questions addressed.

Reasons supporting success

Given a preliminary plan for potential programs to deploy, target markets for whom the programs will be designed, a vision for how and where those programs will compete and win, and an organizational plan for bringing them to market, an institution must ask itself, *Why do you think you will win*

now and in the future? What is it about each program that will win in the market? Once recognized as the winner, what will keep other programs from overcoming the institution's advantage?

For traditional face-to-face programs, institutions have conventional supports for their market position — their physical location on a map, their campus facilities, and the sense of community that students can immerse themselves in while on campus. None of these are easily or reliably realized with online learning. While many students currently earning online degrees do come from within a certain physical distance of the institution's actual campus, that won't necessarily always be the case, and it is definitely not always true now. If an institution wants to maintain this geographic draw, it should develop a plan for providing services within its locale for current students and alumni so that they get actual, not just psychic, benefits from the institution's proximity.

One plan for creating a more significant barrier to entry into your target market is to invest in cross-program technologies and services that would be difficult for competitors or potential competitors to duplicate. This is similar to the reasoning behind an institution's decision to invest in a top-notch gym, library, or dining hall — but, in this case, the investment could be directed at technologies that support *all* of the institution's online programs. For example, ArtCenter College of Design, in Pasadena, Calif., has made significant investments in both a distinctive learner experience platform and a tool for teaching art and design online. Both investments exceed justification for a single program but, since they will both be used across all of ArtCenter's online programs and some of their face-to-face programs, the investments make complete economic sense. Further, given the clear superiority of the teaching tool and the difficult process required to create it, it is both a current differentiator across all of ArtCenter's programs and one that can continue to protect the college's position as they work to evolve the tool over time.

Investment and funding

This brings me to my last point for this set of questions. When an institution has a differentiator, it must plan on investing in that strength and continually signal to the market that it is making these investments. It is not enough to say "we use this distinct pedagogy" or "we provide the most valuable nursing degree in this area" (or whatever). The institution has to understand that these statements are descriptive of *current* affairs — which can always change. Other institutions can enter the market. Other institutions can detect a market leader's vulnerability and perhaps create a feature that directly trumps

the leader's feature. The only way to maintain a lead is to continually invest in the differentiating factor.

The *source* of an investment can affect how an institution's leadership might frame the economic benefit of that investment in online learning. If the source is a gift (whether from alumni or a corporate partner), the benefit of the gift can be framed as an institution improvement, an improvement in the lives of current and future students, or a defensive move to ensure the continued success of the institution. These are all indirect and long-term benefits that would be difficult to economically justify on the basis of enrollment increases alone at specific programs. For internal accounting purposes, because of the generality of the investment, its value could go right to the balance sheet or at least to overhead costs as opposed to the income statement for a particular program; thus, neither enrollment targets nor tuition rates would have to increase in order to fund the investment. The benefits would flow both to the student by improving the experience and to the institution by improving its overall competitive position.

Chapter 6

Summary

I started this paper with an explanation of Porter's basic framework for generic competitive strategies. I then explored how the Generalized Differentiation model can be used to more clearly define how an organization can compete in the market. Finally, I used the Hambrick and Fredrickson framework to more completely define a competitive strategy. The purpose behind all of this exposition is to improve decision-making by leadership of institutions that are making significant investments in new programs (both online and not).

To create a strategy that has a chance to succeed, leadership must involve the board, faculty, staff, and students. It will be a difficult process. It will be a huge investment in time and money, so it is best to gather as much input as is reasonable. Many colleges are facing existential challenges that have been exacerbated by the rise of online learning. The quality of the institution's response will have much to say about its near-term and long-term successes and challenges.

Appendix A

Define model terms and concepts

A.1 Definitions & assumptions

In this section I define the terms and concepts included in the model. I have tried to simultaneously use the language of mathematics — in order to be as clear as possible — while also minimizing and compartmentalizing its use to improve readability. All of the model's terms are defined in the following table.

A.2 Model variables

Symbol	Name	Interpretation	Constraint
$B(p)$	Budget	The amount that an institution has budgeted to spend on program p	
$F(p,i)$	Features	Program p has n possible features, where i is a specific feature ($i \leq n$); a larger value indicates that a feature is more attractive	$0 \leq F(p,i) \leq 1$

Symbol	Name	Interpretation	Constraint
$L(t,p,i)$	Knowledge	Prospect t has a specified level of knowledge of feature i at program p; a larger value indicates that a prospect is better informed about that feature at that program	$0 \leq L(t,p,i) \leq 1$
$V(t,i)$	Value	Prospect t places a value on feature i; a larger value indicates that a prospect values the feature more	$0 \leq V(t,i) \leq 1$ $V(t) = \sum_{i=1}^{n} V(t,i) = 1$
$M(t,i)$	Minimum value	Prospect t has a minimum value (on the same scale as $F(p(i))$ that it requires to be considered a "good value"; below that value it is considered a "bad value"	$0 \leq M(t,i) \leq 1$
$Q(t,i)$	Satisficed feature	Prospect t only requires a minimum value for feature i; if true, then this term equals 1; otherwise, equals 0	$Q(t,i) \in (0,1)$
$\|Q(t)\|$	Number of satisficed features	Number of features in the satisficed feature set for prospect t	$\|Q(t)\| = \sum_{i=1}^{n} Q(i,i)$
$\|hatQ(t)\|$	Number of maximized features	Number of features that are not in the satisficed feature set — i.e., that are maximized features — for prospect t	$\|\hat{Q}(t)\| = n - \|Q(t)\|$
$AP(p,t)$	Acceptable programs	Program p is acceptable to prospect t; if true, then equals 1; otherwise equals 0; is true if every satisficed feature has a value above the minimum value; if there are no satisficed features, then always 1	$AP(p,t) \in (0,1)$
$K(p,r,t)$	Cluster	Prospect t is in cluster r for program p; if true, then equals 1; otherwise, equals 0	$K(p,r,t) \in (0,1)$
$O(t,p)$	Overall value	The overall value that prospect t places on program p	
$A(p,t)$	Attends	Prospect t has decided to attend program p	$A(p,t) \in (0,1)$
$E(p)$	Enrollment	The total enrollment in program p	$E(p) = \sum_{i=t}^{T} A(p,t)$

Symbol	Name	Interpretation	Constraint
$U(p)$	Tuition	The per-student tuition rate for program p	
$R(p)$	Revenue	The total revenue for program p	$R(p) = E(p) \times U(p)$
$S(p, i, e)$	Feature cost	The cost to provide feature i at program p at enrollment level e	
$C(p)$	Total cost	The total cost for program p	$C < p) \leq B(p)$
			$C(p) = \sum_{i=1}^{n} S(p, i, E(p))$
$\pi(p)$	Total profit	The total profit for program p	$\pi(p) = R(p) - C(p)$

A.2.1 Maximization goal

All of this leads to the following equation for the overall value that a prospect t places on program p:

$$O(t,p) = \text{AP}(p,t) \sum_{i=1}^{n} ((1 - Q(t,i)) \times (F(p,i) - M(t,i)) \times L(t,p,i) \times V(t,i)) \tag{A.1}$$

Let's step through this term by term and consider how it affects the overall value that the prospect places on the program:

- ***AP(p,t):*** Only those programs for which the satisficed features have reached the minimum value are included in the analysis.
- ***i=1…n:*** i is a specific feature among the n total features; thus, this is a summation over all possible features.
- ***(1 - Q(t,i)):*** Since *Q(t,i)* equals 0 for maximized features, then *1-Q(t,i)* equals 1 for maximized features, and these are the features that the prospect is maximizing over.
- ***(F(p,i) - M(t,i)):*** This term specifies by how much a program's feature exceeds the prospect's minimum requirement for that feature (again, just for the maximized features). Increasing the feature quality would increase the overall value.
- ***L(t,p,i):*** The more the prospect knows about the feature, the greater the possible overall value. If the prospect does not know about the feature, then the quality of the feature would have no effect on the overall value. Similarly, if a prospect knows a lot about the maximized

feature but the feature quality is less than the minimum required, then this shortcoming can have a large negative effect on the overall value.

- ***V(t,i):*** This term specifies how much the prospect values the feature. The more the prospect values the feature, the bigger the impact on the overall value.

After determining the overall value for each program, the prospect then would choose the program with the greatest overall value.

Appendix B

Sources

1. Original work by Porter

    a) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, Michael E. Porter, The Free Press, 1980.

    b) *Competitive Advantage: Creating and Sustaining Superior Performance*, Michael E. Porter, The Free Press, 1985.

2. Online resources about Porter's work

    a) "*An introduction to Porter's generic strategies*," September 2, 2015, Capsim.

    b) "*Porter's Generic (Competitive) Strategies*," BusinessBalls.

    c) "*Generic strategies: A substitute for thinking?*," Cliff Bowman, Stratevolve.

    d) "*Porter's generic strategies*," Wikipedia.

    e) "Generic strategies after two decades: A reconceptualization of competitive strategy," John Alan Parnell, *Management Decision* (September 2006), pp. 1139-1154.

    f) "A critique of Porter's cost leadership and differentiation strategies," Y. Datta, *Chinese Business Review* (April 2010), pp. 37-51.

3. Defining a business strategy

    a) "Are you sure you have a strategy?," Donald C. Hambrick and James W. Fredrickson, *The Academy of Management Executive* (November 2001), pp. 48-59.

b) "Customer intimacy and other value disciplines," Michael Treacy and Fred Wiersema, *Harvard Business Review* (January-February 1993), pp. 84-93.

c) *Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation*, Dorothy Leonard, Harvard Business School Press, 1995.

d) *Strategy in Practice*, Cliff Bowman, Prentice Hall Europe, 1998.

4. "*Multiple-criteria decision analysis*," Wikipedia.

5. Scenario planning

   a) "Scenario planning: A tool for strategic thinking," Paul J.H. Shoemaker, *Sloan Management Review*, Winter 1995.

   b) "The use and abuse of scenarios," Charles Roxburgh, *McKinsey Quarterly*, November 2008.

6. Learning About OPMs and the Alternatives

   a) *A Financial Model for Online Programs: Revenue Sharing vs. Fee-for-Service*

   b) *Why You Should Prioritize Capacity Building When Launching Online Learning Programs*

   c) *How to Choose an Online Program Manager*