

January 2021

Instructor's Manual: Powell Flutes

Steven A. Wasser
Pennsylvania State University

Follow this and additional works at: <https://digitalcommons.memphis.edu/jaee>

Recommended Citation

Wasser, Steven A. (2021) "Instructor's Manual: Powell Flutes," *Journal of Arts Entrepreneurship Education*: Vol. 3: Iss. 1, Article 6.

Available at: <https://digitalcommons.memphis.edu/jaee/vol3/iss1/6>

This Article is brought to you for free and open access by University of Memphis Digital Commons. It has been accepted for inclusion in Journal of Arts Entrepreneurship Education by an authorized editor of University of Memphis Digital Commons. For more information, please contact khhgerty@memphis.edu.

Instructor's Manual: Powell Flutes

Steven A. Wasser

Guest Entrepreneur, Pennsylvania State University

Abstract

Students often see innovation or creativity as beyond them. No doubt many educators hear "I'm not creative" or "I don't know how to come up with ideas" from their students. This manual explains how the case can help students innovate by (1) articulating the need or problem, (2) plumbing the depths of personal experience, (3) staying focused on the objective and (4) assuming away obstacles. While this is a practical approach, Clayton Christensen's concept of "disruptive innovation" provides some theoretical context that is interwoven in the case. Questions for discussion are posed along with brief answers offered by the case.

Subjects

This is an interdisciplinary case and could be used in a general management course. It would also be appropriate for:

- **Operations:** How to achieve technological innovation in a stodgy industry producing a device that impacts the production of art;
- **Marketing:** How to identify and quantify customer needs and understand a product's value equation, the establishment of a "fighting brand" and how to use technology and operations to address market opportunities;
- **Entrepreneurship:** How to innovate products and technology in an arts industry where the art itself places constraints on innovation.

Learning Objectives

Through this case, students will gain knowledge about an approach to innovation that shifts emphasis from the natural tendency of incremental thinking to conceptual breakthroughs. Further, they will begin to understand that innovation is available to them based on their personal experience and maintenance of an open mind, while always keeping focused on the objectives, not the obstacles. Obstacles will eventually be

overcome by working backwards from the desired results.

Theory Discussion

Clayton Christensen formalized the concept of disruptive innovation in the early 1990s. In the December 1995 issue of *Harvard Business Review*, Christensen, along with Michael E. Raynor and Rory McDonald, reviewed and updated the concept.¹ They wrote:

Disruption describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses. Entrants that prove disruptive begin by successfully targeting...overlooked segments, gaining a foothold by delivering more-suitable functionality – frequently at a lower price. Incumbents, chasing higher profitability in more-demanding segments, tend not to respond vigorously...When mainstream customers start adopting the entrants’ offerings in volume, disruption has occurred.

Graphic models are available that demonstrate Christensen’s work. For example, Julia Kylliäinen published a blog article detailing the “Innovation Matrix.”² On the Y axis, Kylliäinen suggested that an innovative product is either incremental or radical, and on the X axis an innovation is characterized as either sustaining or disruptive to a market. Here is my interpretation of that matrix:

| | | |
|-----------------|---|---|
| | Markets | |
| Products | Radically Sustaining | Radically Disruptive |
| | <i>new or substantially improved product in an established market</i> | <i>most impactful- new product which creates new/expanded market</i> |
| | Incrementally Sustaining | Incrementally Disruptive |
| | <i>least impactful- old/old; evolutionary product improvements</i> | <i>many product improvements over time; cumulative impact over time</i> |

In the flute world prior to Powell’s introduction of its Sonaré brand, incumbent businesses generally offered either a professional flute or a student flute. A few companies, such as Yamaha, offered both, and many of the student flute makers offered what is referred to as a “step-up” flute, an instrument priced between the student and professional models. The bulk of the market was in the student and professional segments; the step-up market was trivial in comparison. Both student and step-up models were typically offered with student-quality headjoints, and professional flutes were offered with hand-cut, high-quality headjoints.

¹ Clayton Christensen, Michael E. Raynor, and Rory McDonald, “What Is Disruptive Innovation?,” *Harvard Business Review*, December 2015, 45, <https://hbr.org/2015/12/what-is-disruptive-innovation>.

² Julia Kylliäinen, “Key Innovation Management Models and Theories,” last modified September 6, 2018, <https://www.viima.com/blog/innovation-management-models>.

In 2003, Powell recognized that the value equation for the flute headjoint was extremely strong, whereas the value equation for the flute body was weak. Based on this insight Powell introduced its Sonaré model by marrying a professional headjoint to a student flute. This new hybrid instrument disrupted the step-up market. While Powell's pricing was slightly higher than existing step-up flutes, its primary competitive advantage from this innovation was higher value—a better-quality product offered at a competitive price. Powell's radical product conception greatly expanded the step-up flute market. When 12 competitors copied Powell's innovation and began to cut into Powell's market share, this confirmed the disruptive nature of Powell's hybrid flute according to Christensen's definition above.

Because flutists spend years learning how to play their instrument (how to blow transversally across the headjoint, where to place fingers on keys, etc.), a radically-disruptive product may not look like a traditional flute and would likely be rejected by flutists. An example of just such a disruptive product is a music synthesizer that creates the sound of a flute electronically. While it is serviceable in certain conditions, it lacks the sonority and range of a traditional flute. Scores for movies and Broadway shows have been performed with a synthesizer replacing the flute, but music unions have strenuously fought against this type of substitution.

An earlier characterization of innovation (authored by Rebecca M. Henderson and Kim B. Clark) distinguished architectural from modular innovation.³ They defined *modular innovation* as "innovation that changes only the core design concepts of a technology." They regarded this as distinct from *architectural innovation*, which they defined as "the reconfiguration of an established system to link together components in a new way."

In the Powell flute case, the piccolo with stainless steel keys would be an example of modular innovation since the basic piccolo design was unchanged. The tube was the same design and dimensions as it was before, and the keys performed the same function in the same position. What was different was the keys' material. The change to stainless steel resulted in keys that would not tarnish, an art deco aesthetic and keys that were stronger so that they stayed in adjustment longer.

Discussion Questions

1. Did it make sense for Powell to conduct research on a stainless steel mechanism for a piccolo if Powell knew the product would not be profitable? (See 2(c) and 2(d) below.)
2. What are some sources of motivation for innovation?
 - a. Improve profitability. [Powell reduced operator time for tone hole extrusion from 45 minutes to two minutes].

³ Rebecca M. Henderson and Kim B. Clark, "Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms," *Administrative Science* 35, no. 1 (1990): 12, <https://doi.org/10.2307/2393549>.

- b. Eliminate or minimize product performance issues; improve the quality of a product. [Powell's new technology eliminated ripples in flute tubes from traditional extrusion].
 - c. Stimulate worker's creativity and job satisfaction. [Especially true during a recession or pandemic when product demand is low and workers have "free" time].
 - d. Anticipate future production or product problems and develop solutions before the problems emerge. [Powell attempted to anticipate cost-prohibitive precious metals and replace them with stainless steel].
3. From where does inspiration come?
 - a. Establishment of a clear goal without regard to constraints. [Powell's goal was to automate tone hole extrusion which required putting a big ball through a small hole. By focusing on the objective, Powell conceived of a new way of simulating the action of a solid pulling ball].
 - b. Deep experience and knowledge. [I personally extruded many tone holes, and fully understood the process as well as its limitations].
 - c. An open mind. [The team understood the need to have a ball that opened and closed. By focusing on the objective/requirement, they came up with the idea for the ball bearing ring on a shaft].
 - d. Team input. [The team worked together to figure out how to make a ball expand and contract. I developed my idea of the ball bearing ring in response to a proposal by a team member that was initially considered but ultimately set aside in favor of the ball bearing ring on a shaft].
4. What forms the basis for a fighting brand?
 - a. Know what your core value or competitive advantage is and its source or cause. [The Powell Sound].
 - b. Understand the value equation of product elements. [The headjoint represents over 50% of the acoustical quality of a flute but only 10% of the cost].
 - c. Consider a product extension that complements rather than competes with or cannibalizes your existing product (I would rather cannibalize my own product than have a competitor do it for me). [Powell was very careful to differentiate the "made in China" flute from its traditional handmade flutes].
5. How do you test a new product or innovation?
 - a. Perform a market survey. [Use with caution. Powell's survey vastly underestimated the market for wooden flutes].
 - b. Show a prototype to customers. [Customers often have a hard time conceptualizing something that is outside the realm of their experience].

- c. Rely on the knowledge and instincts of your team; i.e., what some might call "the seat of your pants."
- d. Subject the prototype to laboratory tests or certification.

Epilogue

Powell's qualitative position in the professional flute market came to the attention of a French clarinet company acquiring leading brands of wind instruments. In 2016, I sold Powell Flutes to Buffet Crampon, the world's leading maker of clarinets. Buffet discontinued the stainless steel keyed piccolo, which had a negligible impact on sales and was at best a breakeven proposition. To replace this model, Buffet developed a piccolo using proprietary technology to produce a resin-infused body with keys produced in China. It is now sold under the Sonaré brand. Using Buffet's strong, worldwide distribution system, Sonaré sales increased. They maintain the close relationship to a single supplier of flute keys in China.

Further Reading

Operations

Zarmeen, Parisha, Vanessa Gina Turri, and Ron Sanchez. "Building an Integrative Model for Managing Exploratory Innovation." In *Research in Competence-Based Management Vol. 7*, edited by Ron Sanchez, 85-114. Bingley: Emerald Group Publishing Limited, 2014. <https://doi.org/10.1108/s1744-211720140000007004>.

Agars, Mark D., James C. Kaufman, and Tiffany R. Locke. "Social Influence and Creativity in Organizations: A Multi-level Lens for Theory, Research, and Practice." In *Multi-Level Issues in Creativity and Innovation*, edited by Michael Mumford, Samuel Hunter, and Katrina Bedell-Avers, 3-61. Bingley: Emerald Group Publishing Limited, 2008. [https://doi.org/10.1016/s1475-9144\(07\)00001-x](https://doi.org/10.1016/s1475-9144(07)00001-x).

Marketing

Colbert, Francois, and Yannik St. James. "Research in Arts Marketing: Evolution and Future Directions." *Psychology & Marketing* 31, no. 8 (2014): 566-575. <https://doi.org/10.1002/mar.20718>.

Lange, Candy. "Visibility and Involvement in Effective Arts Marketing." *Marketing Intelligence & Planning* 28, no. 5 (2010): 650-668. <https://doi.org/10.1108/02634501011066546>.

O'Reilly, Daragh, and Fiona Kerrigan. *Marketing the Arts: A Fresh Approach*. London: Routledge, 2010.

Entrepreneurship

Nielsen, Suna, and William Gartner. "Am I a Student and/or Entrepreneur? Multiple Identities in Student Entrepreneurship." *Education + Training* 59, no. 2 (2017): 135-154. <https://doi.org/10.1108/et-09-2014-0122>.

Grefe, Xavier. *Arts and Artists from an Economic Perspective*. Paris: UNESCO Publishing, 2002.

Shaver, Kelly, and Linda Scott. "Person, Process, Choice: The Psychology of New Venture Creation." *Entrepreneurship: Theory & Practice* 16, no. 2 (1992): 23-45. <https://doi.org/10.1177/104225879201600204>.

Schumpeter, Joseph A. *The Theory of Economic Development*. Cambridge, MA: Harvard University Press, 1921.

Bibliography

Christensen, Clayton, Michael E. Raynor, and Rory McDonald. "What Is Disruptive Innovation?" *Harvard Business Review*, December 2015. <https://hbr.org/2015/12/what-is-disruptive-innovation>.

Henderson, Rebecca M., and Kim B. Clark. "Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms." *Administrative Science Quarterly* 35, no. 1 (1990): 9-30. <https://doi.org/10.2307/2393549>.

Kylliäinen, Julia. "Key Innovation Management Models and Theories." Last modified September 6, 2018. <https://www.viima.com/blog/innovation-management-models>.