Creating e-commerce Start-ups with Information Systems Students: Lessons Learned from New Venture Successes and Failures

Alan Abrahams abra@vt.edu Business Information Technology Department, Virginia Tech Blacksburg, Virginia 24061, USA

Abstract

In this paper, we review a variety of e-commerce startups created by senior information systems students, under the author's guidance, over a number of years at multiple universities. We compare the characteristics of the start-ups and comment on various factors which appear to have contributed to their success or failure. Our recommendations are intended to help information systems educators to improve the chances of new venture success in their classrooms, and to enhance the pedagogic value of e-commerce courses.

Keywords: electronic commerce, new venture, small business, capstone

1. INTRODUCTION

Teaching e-commerce and entrepreneurial skills is hugely challenging. A major concern for the information systems educator is identifying the factors that could determine whether a new student-run e-commerce venture proposal is likely to succeed or fail in practice. In this paper, we review a handful of actual e-commerce ventures started by information systems students, and reflect on pedagogic lessons learned from these new e-commerce venture creation experiences.

We begin with a discussion of related work on integrating real-world projects into the information systems classroom. We then review a handful of actual new ventures created by e-commerce students. Next, we analyze and tabulate the critical factors that seemed to contribute to success or failure in the reviewed cases. Finally, we conclude with some recommendations for information

systems educators on how to improve the likelihood of success for e-commerce ventures created in the classroom.

2. RELATED WORK

Teaching information systems students using real projects rather than mock examples is hugely enriching for student participants (Helwig, 2006). In e-commerce teaching in particular, balancing theory and practice is especially important (Changchit, Cutshall, and Gonzales, 2006). Numerous authors have highlighted the pedagogic value of real application environments to students in advanced information systems courses (Chase, Oakes, and Ramsey, 2007; Chen, 2006; Gabbert and Treu, 2001; Janicki, Fischetti, and Burns, 2007; Kovacs, 2005; Klappholz, 2008; McGann and Cahill, 2005; Mitra and Bullinger, 2007; Tadayon, 2004; Tan and Jones, 2008; Tan and Phillips, 2003). In many cases, students work with

an existing client organization (Martincic, 2009; Scott, 2006; Song, 1996). In other cases the client is a not-for-profit organizations (community partner) and students engage in 'service learning', where they undertake a real project that provides a valuable service to the community partner (Lenox, 2008; Saulnier, 2005; Scott, 2006; Tan and Phillips, 2005). Occasionally, the information systems students initiate an entirely new venture (Neck and Stoddard, 2006; Kor and Abrahams, 2007).

In this paper, we do not describe a teaching methodology for creating a system development, e-commerce entrepreneurship course with a strong practical component - the reader is referred to the earlier work listed above for discussion of various teaching formats that integrate real practice heavily into the curriculum. Instead, we review a number of actual e-commerce ventures created by information systems students, assess the likely reasons for success or failure of these ventures, and provide recommendations to assist the educator in designing or selecting new e-commerce venture ideas for the entrepreneurial classroom.

3. CASE STUDIES AND ANALYSIS

A number of authors (Chrisman et al, 1998; Gartner et al, 1999; MacMillan et al 1985, 1987; Roure and Keeley, 1990; Schutjens and Wever, 1999; Stuart and Abetti, 1987; Terwiesch and Ulrich, 2009) have attempted to identify the criteria that distinguish successful from unsuccessful ventures, primarily for the purpose of affording venture capitalists with an effective screening tool to distinguish likely new venture successes from likely failures. Primary factors evaluated are typically segmented into:

- the characteristics of the *entrepreneurial* team.
- the characteristics of the *product or* service,
- market characteristics, and
- financial characteristics

Some authors (Gartner and Vesper, 1994) have also provided large scale surveys on the success and failure of classroom techniques used to teach entrepreneurship.

For this study, we considered over a dozen student-initiated small businesses familiar to the author from his personal teaching experience at multiple universities. The ecommerce ventures include:

- businesses started by students during the author's class, under the author's guidance (Wishfood.com at Wharton; CloneBytes, LazyWash, Trench Interactive, Smashing Electronics, and the Online Business Guidebook at Virginia Tech)
- business started by students prior to taking a class with the author, but grown during class as a class project (Autoboof Productions, New River Valley PC, and University Tease, at Virginia Tech)
- businesses started by students of the author, outside of classes (BoxMyDorm.com, Milo.com, PennDrinks.com, and CupMakes at Wharton; GreekHouseSupplies.com at Virginia Tech)
- a business started by the author over a decade ago when he was still a student at the University of Cape Town (LodeStar Consulting)

The reader is referred to the **Appendix** for details on each venture in our study, including the venture's basic business model, the students' major accomplishments, the venture's status (successful or failed) and the primary observed reasons for success, or failure.

4. RECOMMENDATIONS

Based on the observations of the new student ventures recorded in the Appendix, the following recommendations for information systems educators are made:

Entrepreneurial Team

The founding team should consist of a small set (3 or fewer) of enthusiastic members, all of whom are strongly committed to working for or transitioning the business after the end of the semester. It is essential that the roles of all students involved in the business be defined early on in the semester, through the construction of an appropriate organogram showing job titles. The authors experience indicates, in the absence of

explicit role definition and documenting of job titles, substantial task ambiguity arises, which impedes the operation of the business.

A further recommendation is that the nature and rights of the follow-on team that will run the business after the end of the semester should be documented as early as possible, to avoid later disputes which tend to lead to dissolution. It is recommended that (in the case of for-profit organizations), the followon team hold full ownership of the business. Alternatively, the business may be started as a not-for-profit to benefit a worthy cause. The latter was the case with businessguidebook.org and also has strong precedent in other institutions (see Neck and Stoddard, The not-for-profit model, though unconventional in many entrepreneurship classrooms, motivates students to work towards a common ideal, while avoiding crippling ownership disputes that tend to students arise amongst in for-profit Further, not-for-profit work operations. experience is typically seen more favorably by corporate recruiters when students attend job interviews.

Financial Requirements

Funding for the new venture from the founding students and/or from the university is helpful, but not essential. As substantial start-up funding is typically not available to student ventures, it is recommended that upfront ventures with low financial requirements be chosen. Specifically, capital expenditures should be avoided, with reliance instead on cheap short-term rentals or free trials of technologies while the market for the product is being proven. In our experience, we found that it is important that a business model with low overheads, low upfront costs, and low downside risk be selected, so that the organization was sustainable through incoming orders alone. Reversing the cash flow cycle - i.e. obtaining payment from clients before ordering inventory – was repeatedly a driver of sustainable enterprises (e.g. BoxMyDorm.com, PennDrinks.com, GreekHouseSupplies.com). Early success in obtaining sponsors was helpful for some organizations (e.g. Autoboof.com and the Online Business Guidebook), but not critical to success. Successful startups were able to operate effectively with little funding and lots of student effort.

Revenue Streams

It is recommended that businesses with multiple potential revenue streams be developed, as it was found that initial reliance on a single major revenue stream could be catastrophic. Instead, different revenue streams should be developed, and the most lucrative can be focused on after assessing each. For example, wishfood.com relied solely upon custom cookbook sales, which did not materialize, and was unable to develop online advertising revenues due to low traffic volumes. In comparison, businessguidebook.org attempted to earn revenues from retail book sales (using multiple retail channels), online advertising revenue, and sponsorship revenues. When sponsorship interest surged, the organization was readily able to sacrifice retail sales and offer free hardcopy and ebook editions, which in turn drove website traffic volumes.

Assignment Variation

In a traditional classroom scenario, students are given a single assignment, and produce multiple redundant, replicas of a common model solution. For entrepreneurial ventures, it is recommended that, wherever practical, students be given varying assignments. This has multiple benefits:

- different implementation mechanisms can be cheaply tested, with successful ones retained and others discarded
- students can choose a task they enjoy, and work intensively on it, leading to increased likelihood of success, and
- students learn a broader range of skills by seeing what others are doing, thereby developing a fuller appreciation for a solution or industry rather than just seeing a single technology or company.

For example, with businessguidebook.org, varying assignments included:

 One student worked on Google Adwords pay-per-click campaigns, another student worked on Facebook pay-perimpression campaigns, and a third student worked on Ingenio pay-per-call

- campaigns, allowing the class to develop a fuller appreciation of *performance-driven* online advertising technologies.
- One student worked on deployment of Amazon Fulfillment and another worked on deployment of Google Checkout, allowing the class to develop a fuller appreciation of order management processes and fulfillment operations.
- One student work on a MailChimp email marketing campaign, another worked on Click2Mail postcard marketing campaign, a third worked on a GladHandle.com templated postcard and email campaign, and a small team team management evaluated sales SalesForce.com solutions like Leads360.com and then worked on a Skype telephonic cold-calling campaign. This gave the class an appreciation for different direct marketing approaches (email, postal, and telephonic).
- One student set up aliased email accounts (for example, the email alias "sales@businessguidebook.org"),
 - another set up a toll-free 1.888 number with internet voicemail using RingCentral, a third student set up webbased user forms using SmartFormer on Joomla, and a fourth student set up a hosted, open source, issue ticketing system, osTicket. This allowed the class to develop an appreciation for inbound customer communication management.
- One student configured a GoDaddy.com hosting account while another configured an account for an alternative domain name on BlueHost.com, allowing the students to get an appreciation for different web hosting account administrative control panels.
- One student set up live Google Analytics for businessguidebook.org and another set up live Awstats web analytics for businessguidebook.org, allowing the class to appreciate the different features and presentations of multiple web analytics (website traffic monitoring) packages.

Publicity

Assistance from the university in obtaining media publicity for the new venture is often a significant contributor to the new organization's success. However, media publicity should be well-timed, with attention

given only to relatively mature, highly credible concepts, that are customer-ready.

Technology: Build vs Host

author's experience indicates that The construction manual of а customprogrammed online system by the student teams during a semester should typically be avoided, as the programming and project management required tends to consume the bulk of the organization's time, leaving little time for important business development Wishfood.com, tasks (e.g. marketing). Trench Interactive, and Smashing Electronics were all victims of this issue, though each produced outstanding bespoke systems which fulfilled good educational goals (i.e. learning systems analysis, design, and programming). If the business is to achieve success within a single 4-month semester, it is recommended that existing hosted solutions be used wherever possible - for example:

- CupMakes made use of campusfood.com for order management
- Online Business Guidebook made use of Joomla for content management and Amazon Fulfillment and Google Checkout for fulfillment;
- GreekHouseSupplies.com made use of an online shopping cart service and a drop-shipping service.

Nevertheless, some successful operations indulge in substantial custom development - for example, BoxMyDorm, Milo, and PennDrinks. BoxMyDorm initially deployed a Miva hosted shopping cart then, time permitted, when revenues and transitioned to a custom-written solution using PHP and Adobe Spry (Ajax / JavaScript). Milo was able to employ a team of professional programmers thanks to external financial substantial backing. PennDrinks outsourced its development at very low cost to an off-shore software development house in India.

Idea Generation and Screening

Generation and screening of multiple contesting ideas and designs throughout the establishment of a new venture is widely recommended – for example see Terwiesch and Ulrich (2009). In the authors

experience, the generation of varied ideas (e.g. product designs, logos, packaging, etc.) by the class led to substantial improvements in the products over the originally-conceived straw-man versions. See Kor and Abrahams (2007) for an example of the progression from basic early concepts to improved alternative designs.

Generation and screening of different venture ideas should also be undertaken. Babson College's Foundation Management Experience (Neck and Stoddard, 2006) – widely recognized as one of the most innovative large scale classroom-based new venture creation courses – incorporates screening as a critical initial phase of new venture creation. From the author's experiences in the cases described earlier, it is important that ideas be screened, to ensure that:

- Production of a high quality pilot product within a semester is viable
- There are no significant risks of financial loss or litigation
- A viable market exists for the product
- Students on the team are hugely enthusiastic about the proposed product

Corporate Identity / Graphic Design / Branding

Building a strong corporate identity (e.g. through the early creation of a compelling logo) is essential to securing enthusiasm from both fellow classmates and customers. Great graphic design and branding is a necessary, but not sufficient, condition for success. Use of (paid or voluntary) professional graphic designers outside of class, and use of attractive stock photographs and stock icons, are all helpful to establishing the strength of the brand and consequently the organization.

Networking

The author's experience is that serendipitous contacts made through active networking and talking about the start-up can have a large impact on the success of the venture. In one case, participation in a local day-long entrepreneurship summit (one student staffed a display table, attended short workshops, and placed an attractive low cost full-color 1-page ad in the summit's

accompanying booklet), the led to acquisition of a major sponsor. It is recommended that students participate in local entrepreneurship events and company fairs, as well as visit trade shows and industry gatherings relevant to their market, to promote their organization and attract corporate sponsorships or partnerships. Events in other cities should be considered, particularly when funding is available to cover or subsidize travel, accommodation, and event fee costs for the student traveler. The author's experience is that the students who volunteer to attend these events find the experience of networking with a variety of industry executives both enriching and energizing.

Educational value

Interestingly, the author observed that course ratings were similarly high, irrespective of whether the ventures initiated during the semester succeeded or failed. Indeed, many students who participated in failed ventures commented that they had learned a great deal during the semester and would be more confident in starting a future venture or, indeed, in contributing as a productive employee to the corporation they were joining after graduating. It is recommended, then, that the primary assessment of teaching success be the educational value delivered to the students, rather than solely the profitability of the resulting venture.

5. CONCLUSION

This paper has described over a dozen successful and failed new e-commerce ventures created by information systems students taught by the author at multiple universities over a number of years. Critical contributors to each organization's success or failure were observed (see Appendix). To improve the likelihood of success of future endeavors, it was recommended particular attention be paid to selecting a committed and enthusiastic entrepreneurial team, ensuring the company has low upfront financial requirements and multiple potential revenue streams, giving varying assignments students, providing to university assistance with publicity, choosing easy-to-deploy hosted technologies, always generating and screening multiple ideas and

designs, producing an attractive and compelling corporate identity, actively engaging the students in networking, and concentrating on educational value. It is hoped that the experiences reported in this paper will enhance information systems education by allowing faculty to draw lessons from the cases reported here when teaching their students how to establish successful e-commerce ventures.

6. ACKNOWLEDGEMENTS

The author is grateful to the dozens of information technology students he has taught at Virginia Tech and the Wharton business school over the past 6 years, who engaged in the win-some lose-some business of new venturing both during and outside of class, in the process generating valuable observable experiences.

7. REFERENCES

- Abrahams A.S., Singh T., et al. (2009) The Online Business Guidebook Fall 2009. The Online Business Guidebook, Inc. Blacksburg, Virginia. ISBN 978-1607253921. Also available at www.businessguidebook.org/ebook
- Changchit, C., Cutshall R., and Gonsalves G.C (2006) "Designing an Electronic Commerce Course: An Effort to Balance Theory and Practice", Information Systems Education Journal, 4(108), pp. 1-7.
- Chase J. D., Oakes E., S. Ramsey (2007) "Using live projects without pain: the development of the small project support center at Radford University", ACM SIGCSE Bulletin, 39(1), pp. 469-473, March 2007
- Chen, B. (2006). "Teaching Systems Analysis and Design: Bringing the Real World into the Classroom". Information Systems Education Journal, 4(84). pp. 1-8. http://isedj.org/4/84/. ISSN: 1545-679X.
- Chrisman, J.J., Baurschmidt A., and Hofer C.W. (1998) "The Determinants of New Venture Performance: An Extended Model", Entrepreneurship Theory and Practice, Fall 1998, pp. 5-29.

- De Villiers C. and A.S. Abrahams (2000) "A Model for Addressing the Development of Electronic Commerce Applications in Information Systems Courses", Journal of Informatics Education Research, 2(1), pp. 1-8, Spring 2000.
- Gabbert P., and K. Treu (2001) "Reality check: working with meaningful projects in and out of the classroom", Journal of Computing Sciences in Colleges, 17(2), pp. 191-198, December 2001.
- Gartner W.B., Starr J.A., Bhat S. (1999)
 "Predicting new venture survival: An analysis of 'anatomy of a start-up' cases from Inc. Magazine", Journal of Business Venturing, 14 (2), pp. 215-232
- Gartner W.B., and K.H. Vesper (1994) "Experiments in entrepreneurship education: Successes and failures," Journal of Business Venturing, 9(3), pp. 179-187
- Helwig, J. (2006) "Using a 'real' system development project to enrich a systems analysis and design course", Information Systems Education Journal, 4(62), pp. 1-8.
- Janicki T.N., Fischetti D., and A.T. Burns (2007). "Incorporating Real World Projects and Emerging Technologies into One MIS Capstone Course". Information Systems Education Journal, 5(24). http://isedj.org/5/24/. ISSN: 1545-679X, pp. 1-8.
- Klappholz, D. (2008) "Organizing and delivering 'real projects for real clients courses'". Journal of Computing Sciences in Colleges. 23(4). April 2008. pp. 254-256. ISSN:1937-4771
- Kor, P. and A.S. Abrahams (2007) "Teaching Information System Students To Be Entrepreneurs: A Dot.com Case Study", Communications of the Association for Information Systems (20), Article 32, October 2007, pp. 1-32
- Kovacs, P. (2005), "A project-based model for an advanced web site design and ecommerce course", Information Systems Education Journal, 3(9), pp. 1-11.

- Lenox T.L. (2008) "The Value of Service-Learning in the CIS Curriculum: A Case Study". Information Systems Education Journal, 6(66). pp. 1-9. http://isedj.org/6/66/. ISSN:1545-679X.
- MacMillan, I.C., Siegel, R., and SubbaNarasirnha, P.N. (1985) "Criteria used by venture capitalists to evaluate new venture proposals" Journal of Business Venturing, 1(1), pp. 119-128.
- MacMillan IC, Zemann L, and Subbanarasimha PN, (1987) Criteria Distinguishing Successful from Unsuccessful New Ventures. *Journal of Business Venturing*, 2(2), pp. 123-137.
- Mancuso, A. (2007) How to Form a Nonprofit Corporation 8th edition, Berkley, CA: NOLO. pp. 1-368.
- Martincic, C.J. (2009) "Combining Real-World Internships With Software Development Courses". Information Systems Education Journal, 7 (33). http://isedj.org/7/33/. ISSN: 1545-679X, pp. 1-10.
- McGann, S., & M. Cahill (2005) "Pulling it all Together: An IS Capstone Course for the 21st Century emphasizing experiential and conceptual aspects, soft skills and career readings". Issues in Information Systems, 6(1), pp. 1-7.
- Mitra, S, and T.A. Bullinger (2007) "Using formal software development methodologies in a real-world student project: an experience report". Journal of Computing Sciences in Colleges, 22(6). pp. 100-108. June 2007.
- Neck, H. and D. Stoddard. (2006) "Babson College nominates The Foundation Management Experience (FME) for USASBE's Innovative Entrepreneurship Education Course", 2006 Excellence in Entrepreneurship Education Awards, United States Association for Small Business & Entrepreneurship. Available at:
 - http://usasbe.org/about/awards/USASB E%20Innovative%20Course%202006%2 0Babson.pdf

- Roure JB and Keeley RH (1990) "Predictors of Success in New Technology Based Ventures", Journal of Business Venturing, 5(4), pp. 201-220.
- Saulnier, B.M. (2005) "Service Learning in Computer Information Systems: 'Significant' Learning for Tomorrow's Computer Professionals". Information Systems Education Journal, 3(10). pp. 1-12. http://isedj.org/3/10/. ISSN: 1545-679X.
- Schutjens V.A.J.M and Wever E. (2000) "Determinants of new firm success", Papers in Regional Science, 79, pp. 135-159.
- Scott, E. (2006) "Systems Development Group Project: A Real World Experience", Information Systems Education Journal, Vol. 4, No. 23, pp. 1-10.
- Song, K-S. (1996) "Teaching software engineering through real-life projects to bridge school and industry", ACM SIGCSE Bulletin, 28(4), December, pp. 59-64.
- Stuart R and Abetti PA. (1987). "Start-up ventures: towards the prediction of initial success", Journal of Business Venturing, 2 (3), pp. 215-230.
- Tadayon, N. (2004) "Software Engineering Based on the Team Software Process with a Real World Project." Journal of Computing Sciences in College. 19(4). pp. 133-142.
- Tan J., and M. Jones (2008) "A case study of classroom experience with client-based team projects", Journal of Computing Sciences in Colleges, 23(5), pp.150-159, May 2008.
- Tan J., and J. Phillips (2003) "Challenges of real-world projects in team-based courses", Journal of Computing Sciences in Colleges, 19(2). December 2003.
- Tan J., and J. Phillips (2005), "Incorporating service learning into computer science courses", Journal of Computing Sciences in Colleges, 20(4), pp.57-62, April 2005.

Terwiesch C and Ulrich K (2009) Innovation Tournaments: Creating and Selecting Exceptional Opportunities. Harvard Business School Press, Cambridge, MA.

Appendix

This Appendix describes each student venture, and comments on the observed primary reasons for success or failure. We regard success as any endeavor that is still in business and currently achieves satisfactory ongoing profits for its founders. Failure is defined as any venture that is no longer operated.

WishFood.com

WishFood.com (31 staff members) was a recipe sharing website for food lovers - designed "for people who look to cook and care to share". The website, launched in April 2007, contained over 500 recipes and allowed users to create a profile, upload recipes, share them with friends, and compile recipes into custom hardcopy cookbooks which could be purchased online. See Kor and Abrahams (2007) – for a full description. The company is no longer in operation.



Figure 1: WishFood.com social networking site for foodies

VENTURE STATUS: Failed

Observed primary reasons for failure, and mitigating factors:

- ◆ 6 members of follow-on team jointly assumed control and ownership of business after end of semester, with varying levels of individual availability, and substantial role ambiguity; led to disputes and dissolution
- Lack of sales during pilot (soft launch) market for concept never proven

LodeStar Consulting

LodeStar Consulting (started during a senior information systems capstone class by the author and 3 fellow students in the late 1990's) was a consulting company providing internet, intranet, and extranet development services. Clients included Vodacom (the largest cellular network provider in South Africa), Board of Executors (South African mutual fund company), ComputerWeek (trade publication), Computer Products University (computer products salesperson training site), and Jobs.co.za (job posting board). The latter was cited by the Daily Mail & Guardian newspaper in its 'Best South African Web-Sites of 1998'. The company folded in its second year of operation.

VENTURE STATUS: Failed

Observed primary reasons for failure, and mitigating factors:

- Debilitating dispute during exit of 2 founders
- Departure of some founders to client company
- 4 founders with similar skills (IT): lack of sales and marketing skills and consulting experience led to volatile cash flows
- Office space overheads ate into bottom line
- Poor graphic design and branding

Proc ISECON 2009, v26 (Washington DC): §2326 (referred) © 2009 EDSIG, page 9

CloneBytes LLC

CloneBytes LLC (5 staff members) was a provider of personal computer backup devices and services. The company did not achieve meaningful revenues and ceased operation at the end of the semester.



Figure 2: cloneBytes service offering

VENTURE STATUS: Failed

<u>Observed primary reasons for failure, and</u> mitigating factors:

- Business unable to demonstrate market (no customers in pilot launch)
- Labor intensive service with low margins and complex logistics
- All staff members had secured full-time employment prior to business launch

Trench Interactive

Trench Interactive was a small web design company (5 staff members), offering web design and hosting services. A website was used to showcase prior work but, in spite of strong interest from the primary founder, the business was discontinued as it was unable to attract a paying pilot customer.



Figure 3: Trench Interactive website

VENTURE STATUS: Failed

Observed primary reasons for failure, and mitigating factors:

 Strongly enthusiastic founder, but other team members more attracted to traditional full-time employment

LazyWash.biz

LazyWash.biz (9 staff members) was a provider of 'pick-up and delivery' laundry washing services for college students. Promising results of an initial marketing survey, conducted using SurveyGizmo.com, indicated the existence of a local market for the service. A website was set up, with stock photographs effectively used to create a relevant and attractive theme. CubeCart was used to pilot a hosted online catalogue for the business with simple individual-wash or semester-long service options available. A fun, humorous marketing campaign, including Google pay-per-click, Facebook, and YouTube viral video, attracted 100 customers, but the business was abandoned at the end of the semester as founders proceeded to more lucrative full-time jobs.



Figure 4: LazyWash.biz website



Figure 5: LazyWash.biz hosted catalog

VENTURE STATUS: Failed

<u>Observed primary reasons for failure, and</u> mitigating factors:

- ◆ Students proceeded to other endeavors after semester
- Substantial monotonous physical labor required to operate low margin business with difficult logistics
- ◆ Ownership team too large (9 members)
- Rudimentary logo design, led to weak branding

Smashing Electronics

Smashing Electronics (5 staff members) hosted team video gaming parties, with revenues from attendance fees, concession sales, and sponsorship. Its primary sponsor was Bawls energy drinks. 70 players in 20 teams participated in their first event. The website featured user and team registrations, event listings, and scoreboards.



Figure 6: Smashing Electronics
Online Events Schedule and Scoreboard



Figure 7: Smashing Electronics Event Promotion Poster

VENTURE STATUS: Failed

Observed primary reasons for failure, and mitigating factors:

- ◆ Loss of interest by founding team
- Leader abandoned planned follow-on due to other work and college obligations

Autoboof Productions

Autoboof Productions (3 staff members) produced white-water kayaking videos, for retail sale. Revenues were earned via DVD sales and via industry sponsorship, with the latter contributing over \$2,000 in assets. sponsors included h20 (waterproof headphones), Dedicated Athlete (sports nutrition), Smith Optics (sunglasses and goggles), Mitchell Padles, WRSI safety American Whitewater, helmets, Boatertalk.com. The Autoboof team designed their advertising campaigns for Adwords, boatertalk.com PayPal payment broadbandsports.com. processing for DVD orders was implemented. The Autoboof website attracted over 2,000 visitors over the 4-month semester.

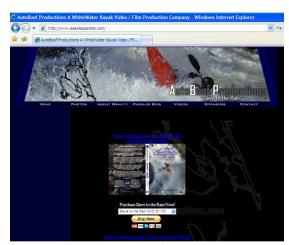


Figure 8: Autoboof Productions
Online Catalogue and Payment Processing

VENTURE STATUS: Successful

- Part time hobby of founder, huge kayaking enthusiast
- ↑ No downside (founder pursues as hobby irrespective of revenues)

New River Valley PC

New River Valley PC (nrvpc.com) is a provider of computer and network repair services, with annual revenues exceeding \$5,000. A website, designed from a template with the addition of attractive themed stock photographs, was used to attract customers and provide information. Service scheduling and payment processing were conducted offline.



Figure 9: NRVPC.com website

VENTURE STATUS: Successful

Observed primary reasons for success:

- ↑ No overheads (service based business)
- ↑ Part time hobby of founder

BoxMyDorm

Boxmydorm.com (started by 2 graduates of the class and a third partner) is a successful full-service shipping and storage company that assists college students with move-out and move-in, and has local operations at a number of college campuses. Boxmydorm.com website features online ordering, payment processing, and box tracking, with а common infrastructure shared by local operations. Boxmydorm was featured in Entrepreneur magazine, October 2007. Annual revenues exceed \$200,000.



Figure 10: boxmydorm.com home-page

VENTURE STATUS: Successful

Observed primary reasons for success:

- ↑ Highly committed team of 3 enthusiastic founders; 2 founders work on Wall Street but consistently contribute late nights to business
- Successful replication of business at multiple sites
- Strong branding of website and packaging (boxes)
- Outsourcing of pick-up, storage, and delivery operations

Proc ISECON 2009, v26 (Washington DC): §2326 (referred) © 2009 EDSIG, page 14

PennDrinks

PennDrinks.com (started by 1 graduate of the class and one partner) provides bulk delivery of soft-drinks to dorm rooms at the University of Pennsylvania. An innovative website allows drink selection, ordering, and payment processing. Following successful media attention local print (campus newspaper), the company sold approximately 22,000 drinks in its first 8 months of operation. The concept and online software have also been licensed at the University of Southern California (drinkinabox.com), the University Massachusetts (massdrinks.com), and Drexel University (drexeldrinks.com).



Figure 11: PennDrinks.com drink selection interface



Figure 12: Effect of local print media coverage on PennDrinks.com traffic (visitors per day)

VENTURE STATUS: Successful

- No inventory (orders collated and purchased later from Sam's Club)
- ↑ Attractive, easy to use, professional, fun, novel website design (outsourced to Konstant InfoSolutions, Jaipur India)
- ↑ Local media coverage in campus newspaper
- ♠ Business easily replicable at other sites (shareable hosted platform)
- ↑ Strong branding of website and packaging (boxes)
- ↑ Successful transition to motivated follow-on team

Greek House Supplies

Greekhousesupplies.com (started by 1 graduate of the class and an external partner) is a successful seller of office and janitorial supplies to fraternities and sororities.



Figure 13:
GreekHouseSupplies.com online catalog

VENTURE STATUS: Successful

Observed primary reasons for success:

- ↑ Committed, hardworking founder
- Zero inventory drop-shipper (low risk)

Milo

Milo.com (started by 1 graduate of the class and others) allows users to search stores in their local town in real-time and find products available to buy immediately. Milo.com is "the largest real-time local inventory database of any company in the world with over 1 million products available in 100,000 stores, and over 22 national retailers in 30,000 U.S. towns".

Real-Time Local Shopping

Search For (e.g. camera, mactocok)

Near (accress, cly, sate or zp.)

Bladsburg, VA 24060

Popular Categories: Cameras TVs Printers Camcorders GPS Mosta.

Search Blacksburg Stores

Advance Auto Parts

Advance Auto Parts

Constitutionary, VA

Barts

Constitutionary, VA

Barts

Barts

Constitutionary, VA

Barts

Constitutionary, VA

Barts

Constitutionary, VA

Barts

Constitutionary, VA

Constitutionar

Figure 14: Milo.com home page

VENTURE STATUS: Successful

- ♠ Committed founder
- ↑ Strong financial backing, experience, and network from father of founder, a highly successful internet pioneer

University Tease

University Tease (universitytease.com), staffed by 11 students, is a vendor of humorous t-shirts targeted at a local student audience. Attracting over 3,000 site visitors during its 4 months in operation, the organization was able to achieve annual profits exceeding \$2,000. Marketing was word-of-mouth and via Facebook campaigns, with payment processing via PayPal. Web analytics (using AwStats) was used to track campaign success. The website includes a suggestion box feature, newsletter sign-up for notification of new product releases, product ratings, and live product inventory.



Figure 15: University Tease
Online Catalogue and Shopping Cart

VENTURE STATUS: Successful

- ↑ Part time hobby of founders (employed full time in consulting)
- Fun, edgy product; low inventory, cheap and rapid production

CupMakes

CupMakes (started by 1 graduate of the class and one partner) is a seller of homemade customizable cupcakes, originally with online late-night ordering, and now with a walk-in retail store in Philadelphia.



Figure 16: CupMakes ordering system at CampusFood.com



Figure 17: CupMakes cupcake customization process



Figure 18: CupMakes walk-in retail store in Philadelphia

VENTURE STATUS: Successful

- ↑ Committed team of 2 founders
- ↑ Simple, fun, new concept
- ↑ Low overhead, minimal risk start using extant online ordering system to prove demand, followed by walk-in retail expansion

Online Business Guidebook Inc

The Online Business Guidebook Inc (more than 40 staff members) is a not-for-profit organization, founded with the mission of providing public education on how to start and grow an online business. The organization produces a hardcopy step-bystep tutorial book, as well as a free online edition of the guidebook (available at http://www.businessguidebook.org/ebook).

A website was implemented and provides online book download as well as facilities for reader, distributor, and sponsor registration. Marketing campaigns were conducted in local print media, as well as via Facebook, Google, and Ingenio. Email marketing and direct mail (postcard) campaigns were also conducted. Over 9,000 hardcopies of the guidebook are currently in print, and available at no charge via all Small Business Development Centers (SBDCs) in Virginia, Florida, New York State, and many SBDCs in California, as well as via SCORE small business counselors in Virginia, entrepreneur development seminars run by the Virginia Department of Business Assistance and Virginia Cooperative Extension. Books can also be purchased via Amazon or Google Checkout. During July and August of 2009, the free e-book edition of the guidebook was downloaded over 15,000 times. The primary sponsors of the Guidebook are GladHandle.com and Progress Printing of Lynchburg VA.



Figure 19: businessguidebook.org website with free e-book and online hardcopy ordering



Figure 20: Copies of the Online Business Guidebook



Figure 21: Successful free e-book launch at businessguidebook.org (visitors per day)

VENTURE STATUS: Successful

- ↑ Commitment of team members to charitable not-for-profit goals
- ♠ Generous lead sponsors
- ↑ Network of distributors quickly obtained
- ↑ Copious publicity provided by university communications management staff
- ↑ Outstanding graphic design and layout of sample publication
- ↑ Not-for-profit format avoided jockeying for ownership stakes
- ↑ Pilot funding from founders and university
- ↑ Successful transition to follow-on team; continuation of course over multiple semesters