



Kitty Hawk in the Classroom: A Simulation Exercise for Entrepreneurship Education

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Abstract. This paper presents a classroom exercise that seeks to encourage entrepreneurial creativity. Description of the exercise is followed by several suggestions for a post-exercise debriefing on the exercise's relevance to creative and entrepreneurial behavior. We then present highlights of evaluation data from 430 students in the five different countries who participated in the exercise and then assessed its learning value. Results show students characterized by high entrepreneurial intentions reported higher levels of perceived learning from the exercise, with perceived learning focusing on 'learning to be more creative' and 'learning to pitch their creation'.

Keywords: simulation, exercise, entrepreneurship, creativity.

1. Introduction

"The university imparts information, but it imparts it imaginatively. At least, this is the function which should perform for society." (Whitehead, 1929 [1967], 93).

"I have a list of 'Lifetime lessons' learned that I use to guide me and remind me in my business career...The one that made my list [from your class] was the "Kitty Hawk fly-offs." I consider myself as a person with creative and unconventional thinking when it comes to solving problems. I also have successfully being doing so for more than ten years in managerial positions prior to my MBA and was quite sure that my team would win the assignment. At the competition some teams had been thinking even more out of the box than we did and I will never forget how they totally out competed [us] and left us behind. I certainly will not forget that you taught us beforehand how this was possible and

how to use entrepreneurial processes as a way to win in business....”
- MBA student, Bond University (January 2005)

This paper seeks to introduce the reader to a simulation exercise suitable for use in an entrepreneurship classroom. The exercise, titled “*Kitty Hawk in the Classroom*”, centers on the student completing a rather unconventional task: developing a paper aircraft capable of flying further and staying aloft longer than any developed by their classmates, all while carrying a payload of a pre-specified amount of coinage.

Our paper proceeds as follows: first, drawing on selections from Greene and Rice’s (2007) recent compendium on entrepreneurship education, we describe the special pedagogical challenge facing the entrepreneurship educator. In short, the challenge of entrepreneurship education centers on developing the student’s latent and potential entrepreneurial creativity (Amabile, 1997), that is, their capacity for generating and implementing appropriately novel ideas that manifest in the establishment of a new venture. Next, we present our exercise as a possible teaching aid for responding to this challenge. In the interests of addressing issues of pedagogical validity we then report our findings from entrepreneurship classrooms in Australia, Canada, China, France and the United States where the exercise was utilized and evaluated by 430 students. Our analysis focuses on answering the question: *Does this exercise provide students with a better understanding of the practical nature of entrepreneurial creativity?* After reporting our findings, we conclude by offering some reflective commentary related to the students’ assessments and identify some possible next steps in continuing this line of inquiry.

2. The Special Challenge of Entrepreneurship Education

This paper builds on three assumptions; namely that entrepreneurship education is *different* from generic management education; second, that entrepreneurship is *teachable*; and third, that by virtue of its distinctive differences, entrepreneurship education requires a fundamentally different *pedagogy*.

2.1. Preliminary Assumptions

Our first assumption is that entrepreneurship education is fundamentally *different* from general management education (Sawyer, 2006). This is one of the core assertions proposed by the community of scholars featured in Greene and Rice’s recent (2007) compendium on entrepreneurship education. Whereas function-centered disciplines, such as marketing, accounting, finance or human resource management, begin with the implicit assumption of an already-existing organization, the discipline of entrepreneurship makes no such assumption.

Entrepreneurship, by its very nature, is essentially *pre-* and *neo-*organizational, focusing instead on the gestational and early life stages of the firm (Nystrom 1993). Because of this, the entrepreneur's task is typically much more vague and unpredictable than the manager's. Amabile (1997) helps spell out this distinction more completely; whereas *creativity* centers on "the production of novel and appropriate solutions to open-ended problems in any domain of human activity" (1997, p.18), and *innovation* centers on "the implementation of those novel, appropriate ideas" (p.18), entrepreneurship requires that both converge in the form of what she calls *entrepreneurial creativity*, that is, "the generation and implementation of novel, appropriate ideas to establish a new venture (a new business or new program to deliver products or services)." (p. 20). While the specific form these novel ideas may focus on a product or service, a new market, on one or more new ways of producing or delivering the product or service, or on ways of obtaining resources to produce or deliver the products or services, the core commonality is *envisioning and operationalizing a new resource-product-market combination that did not previously exist*.

Our paper's second assumption is that while entrepreneurship is different, key aspects of the entrepreneurial experience are *teachable*. While it is admittedly a less structured phenomenon, certain facets of the entrepreneurial experience remain accessible through classroom education. Drucker's (1985) retort to entrepreneurship's alleged "mystique" encapsulates the essence of this second axiom: "It's not magic, it's not mysterious, and it has nothing do with the genes. It's a discipline. And, like any discipline, it can be learned" (1985). Exemplar contributions identified by Greene and Rice (2007) include DeTienne and Chandler (2004), Honig (2004) and Mitchell and Chesteen (1995), to name but three.

Our final assumption builds on the previous two. Given that entrepreneurship is *different* and *teachable*, we assert that entrepreneurship education requires a *different* pedagogical approach. Given the domain's grounding focus on creation (Brush, et al. 2003), the entrepreneurship classroom needs to be "a place...where knowledge is created, tested, and disseminated in a constant learning cycle" (Greene and Rice, 2007: xv). This also resonates with Gorman, Hanlon and King's (1997) review of a decade of entrepreneurship education literature, which notes that one of the dominant conclusions of entrepreneurship educators is "the more 'hands-on' the teaching method is, the greater its chance of success" (Gorman, Hanlon & King, 1997: 70). Variants of experiential learning abound and include business plans, student business start-ups, consultation with practicing entrepreneurs, computer simulations, interviews with entrepreneurs, environmental scans, live cases, field trips, use of films, and classroom simulations (Solomon, Duffy & Tarabishy, 2002). In the spirit of this body of work we offer our classroom simulation exercise titled "*Kitty Hawk in the Classroom*".

2.2. Addressing the Challenge by Simulating the Entrepreneur's Core Tasks

Baumol (2004: 33) recently reiterated Schumpeter's conceptualization of the entrepreneur as "the partner of the *inventor* – as a businessperson who recognizes the value of an invention, determines how to *adapt* it to the preferences of prospective users and brings the invention to market and *promotes* its utilization" [emphasis added]. In the spirit of Baumol's statement, we propose that the challenge of creating a sustainable venture consists of no less than three core tasks: (1) creating a new combination, (2) getting 'buy-in' for that combination, and (3) validating the combination, that is, showing that the combination does what the entrepreneur said it would in fact do. Building on this tri-fold premise, an effective simulation exercise should, therefore, require students to revisit facts and experiences that they are relatively familiar with, and then, through a competitive challenge, require that they reconfigure and extend these facts and experiences in one or more ways that satisfy a market's demand. In addition, the exercise should require that after having come up with their new combination, they articulate how and why their combination is valuable in order to obtain the resources needed and finally, demonstrate that their proposed combination does in fact best meet customer's needs.

And how does our exercise enable students to experience this array of tasks? To answer this question we now describe our exercise, which we call "*Kitty Hawk in the Classroom*".

3. Introducing the Exercise

On December 17th, 1903, two brothers named Orville and Wilbur Wright from Dayton, Ohio in the United States changed the world (Freedman, 1992). Inspired by the work of individuals such as Leonardo da Vinci, Sir George Cayley, and Octave Chanute, the two tinkered with countless prototypes and endured a myriad of flight trials in order to finally keep a human being aloft along the sandy banks of a North Carolina beach called Kitty Hawk.

3.1. Description of the Exercise and Preparatory Activity

In this exercise we seek to re-create, albeit in miniature, the demands and rewards of the Wright brothers' task, that is, of keeping an aircraft aloft. More specifically, students are required to develop an aircraft capable of traveling further and staying aloft longer than any developed by their classmates, all while carrying a predetermined payload, specifically, one dollar of local coinage. A complete description of the assignment's details, as included in a course syllabus, is found in Exhibit 1.

*Exhibit 1: Syllabus description of 'Kitty Hawk in the Classroom'*Description of assignment:

This session involves a 'creative exercise' that requires you to create a new paper aircraft capable of keeping one dollar of coins aloft for as long as possible while simultaneously transporting them as far as possible. The assignment is as follows:

- (1) You may work individually or in a group of up to four students; the only group-related implication is that your airplane design must use the same number of standard size (A4) sheets as the number of people in the group (for example, a group of four must create an aircraft that uses four sheets of paper in its design).
- (2) Your craft must be designed to transport one dollar of coinage. You may choose the number and denominations of coins used; your only constraint is that their total value be exactly one dollar.
- (3) You may not simply crumple the paper into a ball, as this would constitute a projectile rather than an aerodynamically sensitive aircraft-based design.

Description of classroom process:

Please bring your finished prototype to class and be prepared to make a three-minute presentation. The presentation should include a description of how you developed the aircraft and also include your assessment of its prospects for flight, both as it concerns duration aloft and distance flown. Your objective for the presentation is to convince as many of your classmates as possible that your design will fly the furthest and remain aloft the longest. After all groups have presented their designs, each group will place their group's respective 'bet' on whichever aircraft they feel has the best prospects for winning the duration aloft and distance flown competitions; groups may bet on different aircrafts for each of the competitions. "Bets" will be placed by secret ballot. Groups are not permitted to bet on their own aircraft. After the "bets" are recorded we will proceed to the 'fly-off'.

Evaluation and grading:

You will be evaluated using four equally-weighted measures; two relate to the presentation; two relate to your craft's actual performance in flight. The four measures include:

Presentation-related:

- (1) The number of groups that "buy your pitch" for duration aloft competition
- (2) The number of groups that "buy your pitch" for the distance flown competition

Flight-related:

- (3) The rank score in duration aloft (as measured in seconds)
- (4) The rank score in distance flown (as measured in lineal feet/meters, etc.)

The exercise affords numerous opportunities for entrepreneurial creativity. First, students are responsible for determining the number and types of coins carried; in past offerings these have included everything from a single-dollar coin to an eclectic hodgepodge of one-, five-, ten-, and 25-cent pieces. Some see the coins as dead weight. Others, however, see things differently and envision novel ways of reconfiguring the required payload into a set of balancing counterweights that potentially enhance the aircraft's performance prospects.

Consistent with entrepreneurial activity occurring at either the individual or team level (Gorman, Hanlon & King 1997), students choose whether to work alone or in a group (typically with up to three other students). However, the decision to operate as a team carries with it a commensurate complication; groups are required to utilize the same number of sheets of paper as number of group members.

Likewise, consistent with the ambiguities of an emerging market (Porter, 1997), some details, such as those referring to the use of tape and glue, the weight of paper stock, and whether an aircraft and an airplane are the same thing, are left intentionally vague. These ambiguities are by design given the extent to which "the outcome of a conceptual combination depends on what people are instructed to consider" (Ward, 2004, p. 178). Furthermore, we have found such ambiguities serve as important levers during debriefing sessions, particularly when contemplating the role of entrepreneurial creativity. For example, to what extent is the creative exploitation of *ambiguous* constraints one of the defining characteristics of entrepreneurial acumen? As Ward notes, "the way in which people conceptualize a problem strongly influences their likelihood of achieving an original or creative solution" (2004. 181).

We also see parallel benefits from intentional ambiguity as it concerns surfacing issues related to the area of entrepreneurial ethicality (Dees & Starr, 1992). In short, at what point does exploiting ambiguity go too far and transgress the line of unethical conduct? The exercise also provides a grounded segue for exploring this often overlooked issue, but one which we have found a significant number of students feel strongly about.

As concerns the increasingly ubiquitous internet, students are not forbidden from visiting paper airplane-related websites (e.g., www.paperairplanes.co.uk/), as conventional designs are typically not designed to carry a payload of coins.

3.2. Presentation of the Prototypes: Pitch and Fly-Off

On the designated day students arrive at class with their prototype prepared to make an 'elevator pitch' (Applegate & Satrick, 2002). Their task is intended to simulate that of the entrepreneur pitching to the venture capitalist (Timmons & Spinelli, 2003), insofar as both entrepreneur and student seek investor buy-in. However, in the case of the classroom simulation, 'buy-in' is defined differently

– more specifically, by the number of votes received from their classmates. Each entry, that is, each individual or group of students working together, votes for one entry *other than their own*, in each of two categories: (1) Which entry do they believe will remain aloft the longest? and (2) Which entry do they believe will fly further than any other? Students may vote for different entries in each category.

Following voting, ballots are collected, and the class then proceeds to the ‘fly-off’, typically held in a nearby gymnasium or hallway, in which each entry is given one opportunity, or in this case one ‘throw’, to demonstrate that their product will indeed do what they said it would – that is, fly further and stay aloft longer than any other. Following the fly-off, each entry is ranked in two objective criteria of distance flown and duration aloft.

3.3. Evaluation and Grading: Subjective and Objective Metrics

Each entry scored in terms of four equally weighted criteria. Two criteria relate to ‘investor-related validation’, that is: (1) number of votes received for the duration aloft competition, and (2) the number of votes received for the distance flown competition. Two other criteria relate to ‘customer-related validation’: (3) rank score for duration aloft and (4) rank score for distance flown. A sample scoring sheet for the four criteria is found in Exhibit 2.

Exhibit 2: Sample scoring sheet

Entrant #	Name of Entrant(s)	Number of Votes Received - Duration	Number of Votes Received - Distance	Rank - Duration	Rank - Distance	Total Score
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

3.4. Reflections along the Runway

Based on our classroom experience, students perform better when having a period of three to twenty four hours to prepare their prototype and pitch. A short debriefing is held following the reporting of the final scores. Given the nature of the exercise, the debriefing typically addresses a number of different aspects of the process. The whole exercise can be applied in a minimum of three hours, but ideally the exercise should have a minimum three-hour break after introduction and before execution.

Topics and related sub-questions addressed during the debriefing typically include:

1. *Creativity in product design:* How did students develop their aircraft designs? To what extent were they able to see ‘beside’ and ‘beyond’ (Mintzberg, 1995) the assignment’s constraints, and reframe the assignment’s constraints (e.g., the coinage requirement) into an opportunity for differentiating their entry? Conversely, to what extent did they default in to a path-of-least resistance (Ward, 1994, 1995)? And if they did default, what did they default to and what was the cost and/or benefit associated with default behavior?
2. *Selling the design:* How did it feel to attempt to ‘sell’ their creation to their classmates? How difficult was it to encapsulate their product’s distinctive attributes and advantages into a short¹ pitch? Having viewed their classmates’ presentations, what characterized superior presentations?
3. *Deciding how to invest:* How did people decide how to ‘invest’ their votes? How important was product design? How important was the entrepreneur’s presentation? Consistent with the realities of entrepreneurship as a social phenomenon (Baron & Markman, 2000), to what extent were investment decisions influenced by pre-existing friendships and interpersonal reputations?
4. *When people invest in your pitch:* Were students surprised by the degree to which their entry was validated, or refuted, by the market, that is, the class? What did it feel like when people actually ‘bought into’ their offering? Conversely, what did it feel like when they didn’t? What, if anything, might that suggest about the possible gap that might exist between the having the right idea and being able to get people to actually buy into it?

1. Pitches are typically three-minutes, with exact length determined by the number of entrants.

5. *The experience of product validation*: What did it feel like when their aircraft actually flew (or didn't)? Were they at all surprised? What did they think explained the correlation, or lack thereof, between votes and actual performance? Were there any questionable ethical dilemmas associated with any of the prototypes (e.g., violating the design criteria) or pitches (e.g., bluffing and/or outright lying)?
6. *Generalizing beyond the classroom*: To what extent can the students see parallels between what was required of them during the exercise and what might be required of them as future entrepreneurs? What were the exercise's limitations, that is, to what extent is the entrepreneurial process significantly different from what was experienced during the exercise?

4. Assessing the Exercise's Pedagogical Validity

This paper seeks to introduce the reader to an exercise deemed useful for entrepreneurship education. But is the exercise actually an effective way to teach entrepreneurial skills to would-be entrepreneurs? To answer this question we report findings from classrooms in Australia, Canada, China, France and the United States where the exercise was utilized and then evaluated by participating students.

4.1. Evaluation Instrument

A standardized evaluation protocol, which included both scaled items, open-ended questions and selected demographic characteristics (e.g., gender), was administered after the exercise in which each student was asked to complete to evaluate their learning experience². Our analysis of the data centered on the relationship between two variables: the student's reported entrepreneurial intentions and their perceived exercise-related learning.

4.2. Did They Learn? Entrepreneurial Intention and Level of Perceived Learning

As Table 3 shows, the interaction of our two focal variables (i.e., *Entrepreneurial Intention* and *Perceived Learning*) was statistically significant ($p < 0.01$)³. This suggests that students with higher levels of entrepreneurial intentions were significantly more likely to report higher levels of perceived learning.

2. Interested readers may contact the first author for a copy of the evaluation instrument and a complete description of the analysis utilized in assessing the instrument's pedagogical validity.

Table 1 - Contingency TABLE Analysis: Entrepreneurial Intention by Perceived Learning*

	High Perceived Learning	Medium Perceived Learning	Low Perceived Learning	Row Totals
High Entrepreneurial Intention	70 (44.5%)	50 (31.9%)	37 (23.6%)	157 (100%)
Medium Entrepreneurial Intention	39 (27.6%)	61 (43.3%)	41 (29.1%)	141 (100%)
Low Entrepreneurial Intention	27 (20.5%)	55 (41.7%)	50 (37.8%)	132 (100%)

* Chi-sq = 22.19 with 4 df p = 0.002

We also collected basic demographic descriptors from each respondent in our evaluation instrument including gender, major, and GPA and whether their family owned a business.⁴ While there were significant levels of unreported data (particularly for GPA data, for which we received only 133 responses), we conducted additional analyses controlling for each of these four characteristics. The relationship between the two variables of interest was highly significant for males ($p = .0009$), business majors ($p = .001$), students with higher GPAs ($p = .0132$), and for students who did *not* come from a family with a business ($p = .0003$).

6.2. What Did They Learn? Students Comment on Their Perceived Learning

The second focus of our assessment concerned the nature of the students' learning experience. Simply said, what, if anything, did these students perceive they had learned from creating a paper aircraft, pitching their new design to their classmates, and then attempting to demonstrate that their design would actually fly further and stay aloft longer than any other? In answering this question we reviewed students' written responses to five open-ended questions included in our evaluation instrument⁵. We report the leading responses for each question.

The first open-ended question was "*What could the instructor do or say beforehand to help improve your overall learning experience?*" Of the 430 students who turned in surveys, 301 students (70%) gave at least one response to

3. In order to test for the discriminant validity of the *Entrepreneurial Intention* factor, vis-à-vis the *Large Corporation* and *Family Business* factors, we also ran a multiple regression analysis including all three factors as predictors and *Perceived Learning* as the criterion variable, finding a significant positive relationship with *Entrepreneurial Intention* ($t = 3.262$, prob. = 0.001), a positive, but weaker, relationship with *Family Business* ($t = 2.263$, prob. = 0.024) and no significant relationship with *Large Corporation* ($t = 1.048$, prob. = 0.295).
4. We also collected data on whether they had completed the exercise individually or as part of a group; however, given the small number that had completed it as individuals we were unable to perform contingency table analysis.
5. We generally limited our reporting to similar comments mentioned by at least five students.

this question. Of those who commented, 72 students (16.7% of the total sample⁶) felt that that no improvement was required. Just over half of the students who answered (154 or 35.8%) commented on the assignment's ambiguity. Of that group 107 students (24.8%) wanted more clarity in the rules, while 62, (14.4%) students wanted to be provided with concrete examples and 45 (10.5%) felt the rules were unclear. Conversely, a smaller group of students (12 or 2.8%) felt that the instructor needed to place an even stronger emphasis on creativity, 'thinking outside the box' and process innovation. Another eight students (1.9%) believed the instructor needed to more strongly emphasize the importance of the presentation/elevator pitch. Taken together, we concluded that while the majority of the class was essentially satisfied with the exercise, a minority wanted more explicit structure.

The second question asked, *"How could the course outline's description of the exercise be improved to help improve your overall learning?"* Over half (254 or 59.1%) gave at least one answer to the question, with 76 (17.7%) students explicitly stating no changes were required; conversely, 128 students 64 (14.9%) wanted more rules and instructions about what was allowed and what was not.

Question three asked *"What could the instructor do during the exercise to help improve your overall learning experience?"* One-half of students (215 or 50%) answered this question. Of those that responded, 82 (19.1%) explicitly stated that their instructor had done a good job. The remaining comments were relatively fragmented and touched on a diverse range of possible improvements ranging from the instructor providing more explicit guidance as to what designs and materials were best, to having the instructor intervene when one or more group members were shirking on their respective duties.

The fourth question asked students to reflect on *"What, if anything, do you feel you learned from the exercise?"* Of the 430 students, 336 students (85.1%) responded, with the leading response (114 or 26.5%) commenting that the exercise had helped them learn something important about the nature of the creative experience, particularly as it concerned recognizing one or more barriers that impeded their personal creativity. A number of students (52 students or 12.1%) expressly stated that they thought they had learned one or more entrepreneurial skills including learning how to sell a product (64 students or 14.9%) and delivering an elevator pitch (22 students or 5.1%).

The last question was *"Can you suggest a better way to teach the lessons learned from the exercise?"* Of the 430 students, 231 (53.7%) did not answer this question. Of those that did comment, 124 students (28.8%) stated that the exercise was fine 'as is' and that no further changes needed. On the flip side, 18 students (4.2%) had negative opinions of the exercise. In addition, some recommended that the entire exercise be done in class, thus preempting internet consultation,

6. All percentages are stated as percentages of the total sample of 430 students.

because, to quote one student, “the internet is what everyone used, not their minds”.

Taken together, we concluded that a large number of students were satisfied with the exercise and believed no significant improvements were needed. However, we also noted some important points of tension. The most consistent point centered on the exercise’s degree of ambiguity. However, as mentioned earlier, we considered this feature a pedagogical necessity, insofar as the capacity to deal with ambiguity is an inherent part of entrepreneurial experience. In short, while some students wanted more rules, more information, more structure, more help, more boundaries and more examples of what worked and what didn’t, they often failed to appreciate that being able to respond in the absence of rules, information, structure, help, boundaries and examples, is, essentially, what the entrepreneurial challenge is all about. As it concerns future use, these comments suggest instructors might consider explicitly discussing the exercise’s intentional ambiguity at the simulation’s outset.

7. Discussion

Shane and Venkatraman (2000) defined entrepreneurship research as “the scholarly examination of how, by whom and with what effects opportunities to create future goods and services are discovered, evaluated and exploited” (2000: 218). In this paper we have sought to advance understanding in the related area of entrepreneurship education research by introducing entrepreneurship educators to an exercise that requires their students to *create* a good, specifically a paper aircraft, which is then *evaluated*, specifically by their fellow students, and then given the opportunity to demonstrate its ability to *exploit* an opportunity, specifically by flying further and staying aloft longer than any other. By having the students undertake these three interrelated tasks, the exercise seeks to recreate the essential dynamics of the entrepreneurial experience and the requisite necessity of entrepreneurial creativity.

While an exercise like this is generally experienced as quite enjoyable, an important question for educators concerns its pedagogical validity. In order to address this issue we gathered post-exercise evaluation data from over 430 students in five different countries. Our assessment uncovered an important pattern: students with higher levels of self-declared intentions to pursue entrepreneurial careers perceived that they had learned relatively more from the exercise than students with less pronounced entrepreneurial inclinations. In examining this pattern across a selection of demographic characteristics, we found the pattern most pronounced for male students with higher grade points majoring in business that did not come from families that owned a business.

7.1. Implications and Limitations

These findings have important implications. First, they suggest that while the exercise might be of special interest for male students, educators might seek to supplement the Kitty Hawk with an exercise that resonates more directly with female students. Second, they also point to the differential learning needs of students coming from less business-intensive backgrounds. One possible reason that students from business-owning families derived less learning value may be that they experienced hands-on learning, such as that encouraged by Kitty Hawk, within their respective family unit, thus making experiential exercises less necessary.

There are also some obvious limitations to the exercise that deserve mention. A first limitation concerns the limited external validity of building a paper aircraft versus actually undertaking an entrepreneurial initiative. Some students get stuck on this point; entrepreneurship is not about building paper aircrafts, they argue, but about starting businesses. At one level they are correct. However, we would assert that their perspective is also incomplete. Consider, for example, Bach's (1973) observation concerning the tangible and intangible dimensions of flight. "The airplane," he writes, "is just a bunch of sticks and wires and cloth...[but also], a tool for learning about... freedom, ...joy, ...the power to understand, and to demonstrate that understanding." Yes, at one level this exercise is simply about paper and coins; however, looked at differently, it is also about learning to think more creatively and entrepreneurially in creating, presenting and demonstrating the validity of a new combination.

A second limitation relates to the perceptual nature of the evaluation items utilized. More to the point, while students may *perceive* that they intend to pursue an entrepreneurial career, whether in fact they *actually* pursue one is a separate matter. Other researchers might consider exploring the convergent validity between simulations such as Kitty Hawk and the formation and launch of actual business ventures.

A final limitation arises from the possibility of student embarrassment – simply said, standing in front of one's peers and asking for their support and then not delivering as promised, holds potential for loss of face. But is not entrepreneurial activity by its very nature fraught with error-based learning (Mcgrath, 1999)? Given this reality, and its accompanying potential for pain (Shepherd, 2004), perhaps the best service we as educators can perform is to facilitate learning this lesson in a safe context amenable to small-scale failure (Sitkin, 1992). Commenting on the inevitable need for risk-based learning, Wilbur Wright is reported to have said as much, stating that "If you are looking for perfect safety, you will do well to sit on a fence and watch the birds; but if you really wish to learn, you must mount a machine and become acquainted with its tricks by actual trial." So too, we would argue, for learning the art of entrepreneurial endeavour.

8. Conclusion

Orville Wright once asserted that “The exhilaration of flying is too keen, the pleasure too great, for it to be neglected as a sport.” In this paper we resonate with Orville’s assertion and extrapolate that “the exhilaration of flight is [likewise] too keen” to be neglected as a teaching tool for would-be entrepreneurs. Building from this assumption, we have sought to introduce the reader to a classroom exercise that simultaneously requires creative thinking, personal selling and effective implementation – all tasks identified (Timmons & Spinelli, 2003) at the very heart of entrepreneurial endeavor.

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