# Online Simulation Game for Experiential Learning of Competitive Fashion Business

# Keywords: online simulation / experiential learning / fashion education

# Abstract

Purpose – Simulations are an effective tool for teaching and learning, since they allow students to experience real life business environment. There is a woeful lack of practicing online simulations in contemporary fashion business pedagogy. The current study aims to execute and evaluate an online simulation game for learning of fashion business.

Methodology – The online simulation was executed with fashion merchandising students where four teams participated. The qualitative data was collected from students through open-ended questionnaires and focus groups. Results about the simulation's contributions are presented in relation to complete learning experience of students.

Findings – The conclusion from the study is that online simulation is an effective tool for teaching the nuances of fashion business like forecasting, marketing strategy development and decision making related to functioning of entire business. This was reported to be effective in substantially reducing 'phobia of financial analysis', which many fashion students have. This simulation was also observed to be effective in making students' appreciate systems nature of fashion business.

Practical implications – Online simulation can be implemented with students in Fashion Marketing or Merchandising training sessions. With this simulation, the students gain more practically relevant experience, as compared to other alternative teaching techniques. Furthermore, the game can be used in organizational training to improve fashion Marketers techniques and experience in reacting to unexpected events. By simulating realistic competitive conditions, knowledge and skills learned can be transferred to the outside fashion business environment.

# Introduction

Business simulations have been in use for many years. Some of the most recognized Simulations are Beer distribution game (Goodwin and Franklin, 1994), Operations management (Lainema, 2005); Accounting (Hoffjan, 2005); Sales Management (Faria and Dickinson, 1994); Information Systems (Martin, 2000); and Strategy (Rehling, 2005). However there is lack of

execution of simulation games in Fashion education. This paper attempts to evaluate the execution of web based business strategy game for fashion merchandising students. This initiative attempts to bridge the need gap in current pedagogy of not running online simulation in fashion marketing and fashion merchandising education. This research is study of students' learning experience through online simulation game (www.bsg-online.com); a simulation game exercise developed to introduce students to the world of business strategy whilst providing a real life learning experience of value chain in non- threatening, yet testing environment. The uniqueness of this simulation is its focus on real world issues faced in functioning of value chain and access by faculty anywhere anytime through the web.

#### **Literature Review**

This section introduces related literature from the areas of fashion marketing education and simulation games.

#### Fashion Marketing Education and experiential learning

Fashion education is essentially a professional education that caters to the individuals who are looking forward for a career in fashion business. Teaching and learning model which cater to this form of education must also include certain amount of experiential learning, in addition to teaching established theoretical concepts. Diamond (2002), highlights that variety of activities involved in fashion results in jobs that attract people with different backgrounds. In fact, more often than not, what the companies are looking for is an understanding of the broad context in which customers select, buy and use fashion products and services. A survey conducted by Howse et al (2000) shows that members of the fashion fraternity rate practical skills, such as buying-criteria planning, critical interpretation of past data, team building and customer-relationship management very high. Results of this study reiterate that, for a successful career in retail, skills such as decision making, negotiating with vendors, merchandise management, understanding needs of customers, resolving frustrating situations at the workplace effectively and knowledge of inventory are of primary importance.

However it has been pointed out that in marketing education, the gap between practice and teaching has widened and there is immediate need to improve pedagogy and the learning environment (Mowday, 1997). There is a felt need for active learning, where the student is an involved participant in the learning process. Biggs(2003) suggests that the focus should be on how students learn and that teaching staff need to instill a deep approach to learning by

providing students with varied stimulating learning environments. The goal should be to incorporate experiential learning, which is a participatory method of learning involving a variety of a person's mental capabilities. It exists when a learner processes information in an active and immersive learning environment (Feinstein et al 2002). Kolb (1984) explained that participants involved in an experiential learning exercise must be able to involve themselves fully, openly, and without bias in new experiences; a study by Feinstein (2001) has shown that experiential learning activities can increase a learner's dynamic knowledge. Findings demonstrate that experiential learning increases learners' capacity to evoke higher-order cognitive abilities in terms of problem-solving skills and judgment. Specht and Sandlin (1991) believe that experiential learning focuses on 'doing' in addition to the 'hearing' and 'seeing' that occur in traditional lecture class.

### **Simulation games**

Simulation games are experiential in nature and focus on doing, Amnon (2007) explains that a game is the replication of a system where the decisions are made by human players. Bushell (2001) defines the term 'business game' as an interactive, competitive activity, which simulates the major elements of a profit seeking business. Gaming consists of 'interactions among players placed in a prescribed setting and constrained by a set of rules and procedures'. This interaction that excludes acting can also include 'competition, cooperation, conflict, even collusion'. Games of this type are thought to have originated in China around 3000 BC from Wei Chi, the precursor of chess (Hsu 1989) or from Wie-Hai, a Hindu game (Wilson, 1968). These games were militarily oriented. Winning occurred when one's opponent was defeated through the eradication of his or her armies. Simulation games can exemplify effective learning principles enabling students to manipulate and evaluate rather than reproduce concepts (Jackson, 2004).

In the contemporary marketing education context, decision making and risk associated with that are an important learning area for students. Declan and Brown (2000) explains Learning in simulation game occurs at various levels. Players learn from the contextual information contained in the game, through risk taking, weighing risks, benefits, costs, outcomes, rewards, resulting from decision making. Net et al (1996) indicate that in real world Marketing environment the most regular and critical job is 'decision making by teams not individual' hence, any techniques that create and build a team working and judge its and decision making attributes in academic situation are essential in providing student with relevant career based skills.

In many marketing game teams compete against each other for a limited amount of resources, against a facilitator who is manipulating the external variables. Outcomes are typically rewarded for maximizing profitability and creating innovative marketing strategies. According to Feinstein et al (2002) there is an element of role playing in management games (at least for those involving team play) in that team members interact with one another in producing decisions. It is the imperfection and imprecision arising from the persons and personalities present in the gaming environment that makes them somewhat reflective of the decision-making environments.

# Advantages of simulations

Various authors including Moratis and Hoff (2006), Hynes and Whitton (2006), Martin and McEvoy (2003), Gilgeous and D'cruz (1996), Doyle Declan and Brown F. William (2000) and (Fripp 1993) have listed the advantages/benefits and strengths of use of simulation games. An extracted summary is as follows:

- Simulations bring excitement to the learning experience and are stimulating and enjoyable, a clear prerequisite for learning.
- Valuable in team working skills, Participants learn to work with, and through, others.
- It offers variety and complement lecture or case studies. It provides experiential learning and quick feedback
- Key characteristics are the focus on results and output orientation and the competitive element of simulations.
- A wide range of analytical techniques can be taught and used. The participant is active throughout, not passive, as with other training methods.
- Participants gain experience without paying the price of wrong decisions in a real-world setting.
- Time can be compressed with years of business activity simulated in a single day.
- Gaming provides some preparation for the uncertainty of real life.
- Participants are able to practice decision making techniques.

It also improves other skills as Whitteley and Faria (1989) concluded that simulation games are effective in improving quantitative skills. However it is important to focus on development of skill sets which are not possible to be developed through lecturing or case studies. The pedagogical

value of simulation should be focused on the development and acquisition of decision-making and interpersonal communication skills.

# Limitations of simulation games

Simulations are very exciting and interesting method of learning however there is 'caveat' prescribed by few authors; for instance Klassen and Willoughby (2003) argue that although it is clear that students generally enjoy in-class games, it is at times unclear if intended learning occurs during these exercises. It is difficult to separate learning that occurs during games from other forms of learning (e.g., lecture, reading the text, working on practice problems). Gilgeous and D'cruz (1996) argue that they should not be used as an exclusive alternative form of teaching and training because it cannot guarantee that all the lessons being taught were actually understood by students. Games are best used when complementing teaching and training methods, to act as an example or to reinforce lessons. They should not be used purely for the sake of including a game in the training programme. Without a specific purpose, the game ceases to be interesting and becomes a waste of time. Hence games should not be used because they are fashionable, or instead of some valuable lecture, as this is detrimental to the credibility of the games.

Another limitation is validity of assessment in Simulation games. Few papers questioned the validity and teaching purpose of simulation games, Thorngate and Caroll (1987) raised the following concern in classroom context and reported that luck correlated with number of contestants in determining a winner, content structure made no difference that best person would win, and the effect of luck may be attenuated but not eliminated. Declan and Brown (2000) argue that grading on simulation performance suggest that those who have performed the best may simply have hit on correct strategy. It is even possible that players who have performed poorly may have played conscientiously and learned substantially.

# Methodology

The study took an interpretive approach primarily involving participants' observation and open ended interviews with students. This qualitative methodology was chosen because of the nature of study being researched and relatively small number of students involved. Quantitative data was of limited value. In this study, really useful answers were subjective in nature and not quantifiable. The online simulation business strategy game provides the participants with a set of realistic, but unexpected events that occur during a business process, in order to enhance their problem-solving capabilities and decision-making skills as well as hone their technical skills

like pricing, costing etc. Business Strategy game was used – this is a web based game which students can access via the web. The game's validity was tested on four teams of postgraduate students in their fashion merchandising course. Data was collected from students at two points. Firstly, an open ended questionnaire was administered and cross tabulation of data was done to gain meaningful inferences for evaluation of the simulation. Finally students participated in focus group exploring various issues with learning through online simulation.Results about the simulation's contributions are presented in relation to complete learning experience of students.

## **Description of Online Simulation**

This paper evaluates bsg-online, a computer based, internet connected, online simulation game capable of being played by the participants anytime anywhere. The students in team form the sports footwear company and run them in competitive environment for global market leadership against the team formed by other classmates. Students' role- plays manager of company and takes regular business decisions after analyzing the competitive environment. All companies start the business on level playing field having a turnover of \$ 238 million, selling 5 million pair footwear at the end of tenth year of operation. The simulation is truly in global perspective as it caters to the geographic markets of Asia-Pacific, North America, Latin America and Europe Africa. This simulation is modeled to reflect the real world functioning of globally competitive athletic footwear industry. The operations of company are simulated like real athletic footwear company that manufactures shoes at company operated plants. The sales-cost-profit relationship is based on sound business sense contextualized to global athletic footwear industry.

Students playing the role of co-managers of athletic footwear company are required to develop and execute strategy that boosts the earnings year after year. Managers take online decisions each period relating to branded and private label production, increasing or selling plant capacity, upgrading plants, compensation and training of workers, distribution, pricing and marketing, bids to sign celebrities for endorsing brands and sales forecasting. In this global simulation managers are also required to consider import tariffs, exchange rate etc. During the simulation organization focus on efforts enhancing its merchandise with new styling and alter the number of stock keeping units (SKU's) in product portfolio. Additionally organizations strives to enhance its revenue and brand equity in the market through pricing tactics, advertising, discounts, getting rid of old stock, convincing footwear retailers carry their brand, providing merchandise and promotion support to the retailers, good lead times and promoting e tailing of footwear.

#### **Evaluation of the Online Simulation:**

The learners were students from Fashion Studies. Fashion Marketing is practical discipline, where only knowing theory will not automatically translate into application. It's important to blend conceptual understanding with ability to apply the learning in given context. The game is introduced to create an environment where they can experience how business functions through decision making and commercial pressures in a cutthroat competitive environment. It was intended that they must appreciate how the interactions between various components of fashion value chain take place in real world environment. The game exposed them to forecasting, interdependence, risks, decision-making and relate to theory taught earlier. This simulation also achieved one of the course learning outcome of appreciating the functions and structure of various components of fashion value chain namely forecasting, production, marketing, retailing and finance.

The simulation was absorbing for the students. The game was effective in drawing team to participate intensively to gain profit for their team. The students reported to be enjoying the game to the point of putting extraordinary effort and time. As an aspect of strategy, students followed the act of analysis and decision making with jest and excitement. In review session performance of various groups were discussed for their strengths and weaknesses. Overall the game was exciting, action-packed and all-encompassing for the students. It was an alternative approach to learning a business strategy fundamental in a non-traditional manner, allowing students to deduce and reflect on their understanding.

#### Effectiveness of Simulation in Learning of Fashion business

The game was effective in giving students an awareness of the systems nature of fashion business. Earlier through theory though they learned fashion business framework but were not able to appreciate fashion business as a complex system comprising physical resources, processes, people, product, and customers, operate in a competitive environment. One student reported in open ended interview

....The game was very effective in making us appreciate integrated, holistic and systems nature of fashion business. In theory we learnt marketing, finance and operations in compartments. This game integrated all the things learnt in fashion business theory, which we earlier perceived as separate verticals.

Moreover this game was also effective in motivating students for self learning and to explore more knowledge in fashion business specially costing, marketing and operations as they could see the immediacy of results (winning). Student 'B' reported..

.....We were inspired to learn more about marketing strategy and finance models especially finance as it was expected to improve our position in competitive fashion business environment. We studied very hard, probably much more than we could have done if it were a theory course.

The common view expressed across the student community was that the simulation was effective in learning of functioning of real Fashion business. A typical response was:

Simulation was very helpful in my learning of Marketing systems, forecasting, production planning, and strategy, understanding manager's responsibilities, role of external factors and functioning of fashion value chain.

In addition to knowledge and understanding, participants also reported the development of the skills. Most frequently mentioned were development of analytical skills and decision making skills. Few students reported learning's in the area of team work skills.

It was a very intensive game and we learned that without in-depth internal and Industry analysis no target can be achieved. Proper calculation on forecasting of demand, capacities and pricing should be done as most of the companies err on these issues. I also realized that empathy is critical to team building.

The simulation participants also reported applied learning. Students learned from being given the opportunity to apply learning from carrying out realistic simulation- learning from doing. Student D reported

.. As the game runs for a period of 10 years it presents a live scenario in front of us and gives a better learning by the medium of mistakes we make. It gives a chance to overcome a situation by employing new strategies and ideas.

#### Team dynamics and interpersonal relationships

Most of the students reported preference of working in teams as against individual work in online simulation game. However, few students reported domination by students with higher understanding of finance as this simulation had a substantial portion of number crunching. In the process, students with lower level of understanding in finance reported loss of confidence. One of the possible solutions is tutorials in finance for needy students. The students reported equal opportunity in decision making and there was no evidence of assertive students dominating the decision process. However there were instances of non-happening of team meetings. Later on compulsory team meeting were introduced during the game period. The students preferred group size of three to four as against the options of group size of two or five and above. Attendance was an area of concern as few students who felt dominated by finance savvy students remained away from the team meetings. Tutor presence and allotted time within campus is recommended to improve the attendance for quality discussion for decision making. However, the tutor time required would be higher in this case and can be used in moderation. Teams also reported internal rules for uploading the decisions like nomination of a leader who was empowered to upload the decision on internet. Members having financial knowledge enjoyed referent powers over the group and seems to be leading the decision process.

#### **Risk and decision making**

The obvious advantage of this game was to take decisions without real financial risk. However, students were also seriously considering the risk of loosing the top positions and grades if the decisions were wrong. The students negated the notion of no risk in taking the decisions as they perceived higher level of risk inherently in the game. There was also lot of stress on teams performing at lower ranks. There was also peer pressure and instance of sarcasm on the team which was poor in performance. While playing the game Students experienced the risk that is associated with each decision they make in business because a single wrong step may nullify all the efforts. For example one student reported:

I started with making good quality shoe in the start but didn't consider celebrity appeal which ultimately leads to the decrease in my company's market share. Risk has to be taken but risk should be calculated and one should keep a tolerance level for it so it is good to take risk but one should be prepared for it by anticipating it up to a level.

Another important factor which was reported learnt is relating to decision making. The students learnt the significance of making decision in competitive Fashion marketing environment, which is captured as follows in anecdotal evidence..

Deciding a set strategy and continuing it is also major challenge. In case if one does not clearly decide then more problems are faced in the long run. Even if one does not decide it in the start of the business the environment of the industry forces you into one direction (market strategy) and you start following it. So it is better to understand the opportunity in the market and then forming your strategy according to it so that you don't incur loss of changing your company's positioning in the market abruptly.

## **Strengths of Online Simulation**

There were two main areas of strength mentioned, practical approach and learning specific technical aspects. Some students referred to the practical approach as active learning or learning by doing. Many students mentioned the benefits of doing something practical rather than theoretical. This was a perceived strength identified by the majority of participants.

It gave a very practical and real approach towards the working environment.. Fun learning of such a huge concept..a practical way to learn theoretical concepts... It provides an atmosphere which is quite close to the reality, for example generation of Footwear industry report and Competitive intelligence reports provide a thorough analysis of the market and the competitors for taking informed decisions. It also gave me freedom to anticipate the competition and increase my target level accordingly. However it raised the tension when my profits were lowered; overall this improved my confidence level..

Secondly the simulation was also successful in motivating students who typically had inertia towards finance to learn specific technical aspect of revenue-cost-profit relationship as it was a real life context. Typical of the responses I received from the students was that given by bbb stated that

I used to think fashion business can be difficult as I was scared of numbers. I was scared of numbers.. Through this simulation financial analysis was almost

clear..Now I can understand key ratios easily. I feel fashion business can be so much fun and very exciting as the numbers are not so scary anymore...

Yet another strength was immediacy of results, the students were particularly happy because they used to get the feedback immediately. Students also got motivated by seeing results of competitor teams online. The sense of competition inspired them to put extra effort.

Simulation presents the results of our decision at the spot so this reduce the time span in taking decision and one year can be completed in one day. It provides the result of all your competitors which really gives the feel that you are running a real company

Some students learned specific technical aspects of managing the business ....i.e. 'actual process of running the business was clear'. The students were very excited with simulation however they might have liked it simply because it was different and novel for them. Surely, they enjoyed it however it facilitated their learning in area of marketing, finance and understanding of fashion business.

# Drawbacks of the online simulation

Though the game was reported to be effective in learning but found to be weak in certain areas. One of the major areas of weakness was that of internet connectivity as in case of internet disconnection students could not precede further. A typically received response was

.. It was frustrating to not save your decisions as you worked very hard on analysis to arrive at decision numbers...

Another major weakness was the possibility to fill in random decision numbers in decision templates. Those students do not learn much as they do not get involved in analysis but just hit and trial of random decision numbers.

Few of the students were not involved in rigorous analysis to arrive at decisions rather they were filling numbers to see impact on profits and selecting the decision which is giving the best impact on profit. ...

# Conclusion

Online simulation was observed to be effective in teaching business strategy and functioning of fashion value chain, costing, enhancing analytical and decision making skills. The simulation dramatically demonstrates that in fashion if you do not do effective forecasting, financial analysis, long term strategy formulation then you are not likely to succeed and how important it is for fashion managers to understand that. This was also effective in substantially reducing 'phobia of financial analysis', which many fashion students have. The simulation was very effective to demonstrate systems nature of fashion business, risk and decision making through experiential learning. The simulation also motivated students for more rigorous self reading. In future, simulation can be attempted in multi country and multi institute environment.

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