

CHINESE STUDENTS' PERCEPTIONS OF BUSINESS GAMING

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ABSTRACT

This paper reports the findings of feedback from postgraduate students' usage of business gaming in China. The survey focused on how students in China viewed business gaming as a learning tool for them and how they perceived that the business gaming can actually help them achieve the course objectives of strategic management in quality. Overall results are highly favourable. The problems as well as benefits associated with the use of business gaming are also identified.

INTRODUCTION

Much have been explored of the use of business games from lecturers' points of view (Roberts and Strauss, 1975; Hegarty, 1976; Wolf 1985; Faria, 1987, Faria and Wellington, 2004; Decker, et al 1993; Williams, 1993; Keefee, et al 1993; and Chang, 1997, 2003), but less has been sought from the students' points of view on business gaming in China. Thus, the authors wish to explore how students in China view the use of business gaming in their course of teaching.

DATA COLLECTION

A survey questionnaire was conducted to the part-time postgraduate students who enrolled in the subject of strategic management in quality. Participants in this survey receive business gaming in their class. A total of 57 survey questionnaire were administered. The response, 57 usable questionnaire were all received.

RESULTS AND DISCUSSION

None of the respondents indicated they had previously involved in Business Gaming. As a matter of fact, this is their first time to have such computer simulation in their class.

Grade Weighting

Students were asked to give their view on grade weights assigned to four major activities: examination, computer simulation, case study, and student participation. The modal response on grade weights for simulation was 1-10% (35 % of respondents); for simulation report, 1-10% (45.5 % of respondents); for discussion/participation, 21-30 % (31.6 % of respondents); for case study, 31-40 % (35.1% of respondents); for test, 1-10% (35.1 % of respondents); for examination, 1-10% (40.4 % of respondents). Table 1 summarizes the outcome.

It is worthwhile to note that majority of the students on China preferred less grade weighting on test (35.1% on 1-10%) as well as examination (40.4% on 1-10%) and tend to place high emphasis on case study. Results here contradict the previous Hong Kong study (Chang, Lee, Ng, and Moon, 2003) on test (1.1% on 1-10%) and examination (6.7% on 1-10%). Does it mean students in China are tired of traditional assessment methods and prefer rather innovative learning methods?

Students' Evaluation on Business Gaming

Students were asked to evaluate business gaming on seven major items: 1. fun/interesting; 2. linking the course to reality; 3. minimizing student frustration; 4. ease of use; 5. conciseness and clarity of student manual; 6. flexibility of the game; and 7. error free programming. A five-point Likert Scale: excellent=1, above average=2, average=3, below average=4, and poor=5 was adopted to be used by respondents to indicate their opinions.

The result shows the four highest combined scores of excellent and above average on 'fun /interesting', 91.2%; 'links the course to reality' 80.6%; 'ease of use', 75.4%; and 'minimizing student frustration', 71.9%. Only 1.8% of respondents indicated the business gaming is below average and none said it is poor on all the items. The results are even more favourable compared to the previous study done in Hong Kong. Table 2 shows the overall result.

Usefulness of Computer Simulations

Twelve subject objectives (Decker, et al 1993) were used for students to evaluate the usefulness of computer simulation to achieve the subject objectives on a four-point

Table 1: Grade Weights

| | 1-10% | 11-20% | 21-30% | 31-40% | 41-60% | 60%+ | valid case |
|-----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------------|-------------------------------|
| 1. SIMULATION | 39.6% [#] 35%* | 27.5% [#] 24.6%* | 13.2% [#] 15.8%* | 8.8% [#] 10.5%* | 7.7% [#] 7.0%* | 3.3% [#] 7.0%* | 91 [#] 57* |
| 2. Simulation report | 47.0% [#] 45.5%* | 26.5% [#] 25.5%* | 13.3% [#] 15.5%* | 9.6% [#] 9.5%* | 3.6% [#] 4.0%* | 0.0% [#] 1.8%* | 91 57 |
| 3. Discussion/participation | 29.8% [#] 5.3%* | 52.1% [#] 26.3%* | 17.9% [#] 31.6%* | 13.1% [#] 29.8%* | 7.1% [#] 5.3%* | 0.0% [#] 1.8%* | 91 57 |
| 4. Case study | 17.2% [#] 8.8%* | 36.8% [#] 8.8%* | 19.5% [#] 17.5%* | 23% [#] 35.1%* | 3.4% [#] 26.3%* | 0.0% [#] 3.5%* | 91 57 |
| 5. Test | 1.1% [#] 35.1%* | 6.7% [#] 26.3%* | 23.6% [#] 26.3%* | 22.5% [#] 8.8%* | 6.7% [#] 3.5%* | 1.1% [#] 0.0%* | 91 57 |
| 6. Examination | 6.7% [#] 40.4%* | 6.7% [#] 22.8%* | 10.1% [#] 15.8%* | 21.3% [#] 15.8%* | 39.3% [#] 3.5%* | 15.7% [#] 1.8%* | 91 57 |
| 7. Other activities | 49.0% [#] 45.6%* | 23.5% [#] 22.8%* | 11.6% [#] 17.5%* | 11.8% [#] 8.8%* | 2.0% [#] 3.5%* | 2.0% [#] 1.8%* | 51 57 |

Note: 1. * - Current survey responses from China
2. # - Previous survey responses from Hong Kong

Table 2: Students' Evaluation on Business Gaming

| | Excellent | Above Average | Average | Below Average | Poor | Valid Case |
|--|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|---------------------------------|-------------------------------|
| 1. Fun/interesting | 18.3% [#] 45.6%* | 34.4% [#] 45.6%* | 37.6% [#] 12.3%* | 7.5% [#] 1.8%* | 2.2% [#] 0%* | 93 [#] 57* |
| 2. Links the course to reality | 4.3% [#] 26.3%* | 3.3% [#] 54.3%* | 41.9% [#] 17.5%* | 17.2% [#] 1.8%* | 3.2% [#] 0%* | 93 57 |
| 3. Minimizing student frustration | 2.2% [#] 22.8%* | 48.4% [#] 49.1%* | 52.2% [#] 26.3%* | 17.4% [#] 1.8%* | 3.3% [#] 0%* | 92 57 |
| 4. Ease of use | 11.8% [#] 26.3%* | 54.0% [#] 49.1%* | 34.4% [#] 22.8%* | 5.4% [#] 1.8%* | 0.0% [#] 0%* | 93 57 |
| 5. Conciseness & clarity of student manual | 5.4% [#] 14%* | 32.3% [#] 35.1%* | 54.8% [#] 49.1%* | 1.1% [#] 1.8%* | 1.1% [#] 0%* | 93 57 |
| 6. Flexibility of the game | 5.4% [#] 26.3%* | 39.8% [#] 45.6%* | 28.0% [#] 26.3%* | 21.5% [#] 1.8%* | 4.3% [#] 0%* | 92 57 |
| 7. Error free programming | 0.0% [#] 14%* | 14.1% [#] 43.9%* | 45.7% [#] 40.4%* | 31.6% [#] 1.8%* | 8.7% [#] 0%* | 92 57 |

Note: 1. * - Current survey responses from China
2. # - Previous survey responses from Hong Kong

Table 3: Students' View on Usefulness of Computer Simulations

| | Critical | Important | Less Important | Not an Objective | Valid Case |
|---|------------------------------|------------------------------|-----------------------------|--------------------------|------------------------|
| 1. General problem identification & analytical | 4.4% [#] 17.5%* | 74.4% [#] 80.7%* | 17.8% [#] 1.8%* | 3.3% [#] 0%* | 93 [#] 57* |
| 2. Understanding functional interrelationships | 1.1% [#] 21.1%* | 14.4% 75.4% | 65.6% 3.5% | 18.9% 0% | 93 57 |
| 3. Learning concepts related to business | 18.9% [#] 26.3%* | 60.0% 70.2% | 17.8% 3.5% | 2.2% 0% | 93 57 |
| 4. Developing planning skills | 14.6% [#] 26.3%* | 60.7% 70.2% | 21.3% 3.5% | 3.4% 0% | 93 57 |
| 5. Developing decision making skills | 22.7% [#] 35.1%* | 63.6% 63.2% | 9.1% 1.8% | 3.4% 0% | 93 57 |
| 6. Understanding general management perspectives | 9.0% [#] 17.5%* | 58.4% 82.5% | 31.5% 0% | 1.1% 0% | 93 57 |
| 7. Improving group process skills | 13.5% [#] 14%* | 52.8% 75.4% | 28.1% 5.3% | 4.5% 1.8% | 93 57 |
| 8. Using financial data to make arrangement decisions | 20.2% [#] 17.5%* | 50.6% 70.2% | 20.2% 5.3% | 9.0% 3.5% | 93 57 |
| 9. Improving written communication skills | 3.4% [#] 1.8%* | 21.3% 71.9% | 46.2% 21.1% | 29.2% 5.3% | 93 57 |
| 10. Improving verbal communication skills | 9.1% [#] 5.3%* | 26.1% 68.4% | 44.3% 21.1% | 19.3% 5.3% | 93 57 |
| 11. Encouraging student computer usage | 7.9% [#] 3.5%* | 38.7% 73.7% | 40.4% 17.5% | 16.9% 5.3% | 93 57 |
| 12. Using secondary sources | 7.9% [#] 12.3%* | 36.% 63.2% | 43.8% 21.1% | 12.4% 3.5% | 93 57 |

Note: 1. * - Current survey responses from China
2. # - Previous survey responses from Hong Kong

Likert scale: critical (1), important (2), less important (3), and not an objective (4).

Respondents gave the highest rating of combined critical and important on the followings: 99.7% for 'understanding general management perspectives'; 98.3% for 'developing decision making skills'; 98.2% for 'general problem identification and analytical'; 96.5% for 'understanding functional interrelationships'; 96.5% for 'learning concepts related to business'; 96.5% for 'developing planning skills'; and 89.4% for 'improving group process skills'. Results are more favourable in China in terms of high scores in all categories. Table 3 summarizes the result.

Using Simulation to Test Students' Understanding

Students were asked if it had been helpful towards testing their understanding in terms of their total experience with business gaming. Results show a higher percentage of 87.7 for 'what is my business'; 87.7 for 'bargaining & negotiation in strategic management'; 87.7 for 'managing financial, survival, growth, etc.'; 78.9 for 'analytical thinking in decision making'; 78.9 for 'conflicts of stakeholder interest'; and 70.2 for 'how information &

communication affect competitive position'. Results are favourable and consistent with the Hong Kong Study. Table 4 summarizes the outcome.

Perceived Benefits of Business Gaming

Students were asked of the benefits they received when they worked with business gaming. A total of 87.7 percent of students (50 out of 57) chose 'understanding consequences of decision taken'. Another 78.9 percent (45 out of 57) selected 'developing entrepreneurial skills'. Another 73.7 percent (42 out of 57) chose 'better understanding of market mechanism'. Another 70.2 percent (40 out of 57) was recorded with 'integration of knowledge from a range of subjects'. Another 70.2 percent (40 out of 57) was recorded with 'exercising self control over amount of time spent per session'. Another 70.2 percent (40 out of 57) considered 'exercising self initiative in own learning' can be benefited from business gaming. Results depict a very favourable picture and is consistent with the Hong Kong study. Table 5 provides a better understanding of students' perceived benefits of business gaming.

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Table 4: Business Gaming being Helpful towards Testing Students' Understanding

| | | |
|---|--------------------|--------|
| 1. What is my business | 71.1% [#] | 87.7%* |
| 2. Bargaining & negotiating in strategic management | 70.0% [#] | 87.7%* |
| 3. Managing financial, survival, growth, etc. | 67.8% [#] | 87.7%* |
| 4. Analytical thinking in decision made | 64.4% [#] | 78.9%* |
| 5. Conflicts of Stockholder interest | 63.3% [#] | 78.9%* |
| 6. How information & communication affect competitive position | 63.3% [#] | 70.2%* |
| 7. Sharing information between firms | 58.9% [#] | 70.2%* |
| 8. Managing risk in business decisions | 54.4% [#] | 87.7%* |
| 9. Consequences of current action on future direction | 47.8% [#] | 70.2%* |
| 10. Economic issues in business decisions and activities | 44.4% [#] | 70.2%* |
| 11. Intuitive thinking in decision made | 42.2% [#] | 66.7%* |
| 12. Ethical issues in business decisions and activities | 40.0% [#] | 75.4%* |
| 13. Environmental changes as constraints and stimuli | 40.0% [#] | 70.2%* |
| 14. Networking behavior | 40.0% [#] | 70.2%* |
| 15. How decisions taken within a specific role managers can influence industry forces | 38.9% [#] | 66.7%* |
| 16. Evaluation of on-going action | 36.7% [#] | 63.2%* |
| 17. Strategy as plan pattern, perspective | 35.6% [#] | 61.4%* |
| 18. Predicaments of founders, directors, managers, etc. | 35.6% [#] | 59.6%* |
| 19. Strategic efforts of firms for the benefit of society | 34.4% [#] | 61.4%* |
| 20. Future direction and content action | 33.3% [#] | 61.4%* |
| 21. Testing assumptions about the market | 33.3% [#] | 57.9%* |
| 22. Causing a situation to occur | 30.0% [#] | 57.9%* |
| 23. Acquiring strategic information | 28.9% [#] | 56.1%* |
| 24. Functional interaction | 28.9% [#] | 66.7%* |
| 25. Hierarchy of goals | 27.8% [#] | 61.4%* |

Note: 1. * - Current survey responses from China
2. [#] - Previous survey responses from Hong Kong

Table 5: Perceived Benefits of Business Gaming by Students

| | Frequency (out of 93) | % | Frequency (out of 57) | % |
|--|--------------------------|-------------------|--------------------------|-------|
| 1. Understanding consequences of decision making | 49 [#] | 52.7 [#] | 50* | 87.7* |
| 2. Better understanding of the market mechanism | 46 | 49.5 | 42 | 73.7 |
| 3. Integration of knowledge from a range of subjects | 44 | 47.3 | 40 | 70.2 |
| 4. Exercising self control over amount of time spent per session | 42 | 45.2 | 40 | 70.2 |
| 5. Exercising self initiative in own learning | 41 | 44.1 | 40 | 70.2 |
| 6. Developing entrepreneurial skills | 40 | 43.0 | 45 | 78.9 |
| 7. Allowing participants to practice the art business dealing | 39 | 41.9 | 40 | 70.2 |
| 8. Exploration, testing 'what if' in decision making | 37 | 39.8 | 39 | 68.4 |
| 9. Confrontation of constraints in decision making | 34 | 36.6 | 38 | 66.7 |
| 10. Scheduling time to cope with other objects | 31 | 33.3 | 36 | 63.2 |
| 11. Inclusions of mullet-industry with real markets for products, resources & shares | 31 | 33.3 | 34 | 59.6 |
| 12. Others | 4 | 4.3 | 5 | 5.3 |

Note: 1. * - Current survey responses from China
2. [#] - Previous survey responses from Hong Kong

Table 6 Perceived Disadvantages of Business Gaming by Students

| | Frequency (out of 93) | % | Frequency (out of 57) | % |
|---|--------------------------|-------------------|--------------------------|------|
| 1. Long waiting time after sign on | 21 [#] | 22.6 [#] | - | - |
| 2. Decisions unrealistic | 18 | 19.4 | 2* | 3.5* |
| 3. Preparation time very demanding - understanding manual | 14 | 15.1 | 20 | 35.1 |
| 4. Practice time on business gaming too short | 13 | 14.0 | - | - |
| 5. Preparation time very demanding - reading manual | 12 | 12.9 | 12 | 21.1 |
| 6. Decisions too simple | 12 | 12.9 | 5 | 5.3 |
| 7. Others | 12 | 12.9 | 5 | 5.3 |
| 8. Experience treated as playing and little learning resulted | 9 | 9.7 | 5 | 5.3 |
| 9. Uncertainty managing inputs from other class members | 1 | 1.1 | 1 | 1.8 |

Note: 1. * - Current survey responses from China
2. # - Previous survey responses from Hong Kong

Perceived Disadvantages of Business Gaming

The top three highest scores of perceived disadvantages by students are 'preparation time very demanding - understanding manual' with 35.1 percent and 'preparation time very demanding - understanding manual' with 21.1 percent. This is a bit high when compared with the results 15.1 percent in 'preparation time very demanding - understanding manual' and 12.9 percent 'preparation time very demanding - understanding manual' recorded in HK study. Results from China and Hong are shown in Table 6.

CONCLUSION

The authors attempt to find out how students in China view the use of business gaming in their course. Areas such as previous participation in business gaming; students' view on grade weights assigned to subjects; students' evaluation on business gaming; students' view on usefulness of computer simulations; business gaming being helpful towards testing students' understanding in terms of their total experience with business gaming; and perceived benefits and disadvantages of business gaming by students had been explored. Overall results are very favourable to business gaming since none of the respondents have been exposed before.

The current study is very limited in that it includes only a sample population of 57 students taking strategic management class in quality in 2004. Perhaps, further research is needed to include a broader student population as well as to explore whether the business simulation used in the strategic management class would really enhance and stimulate students' learning in China.

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