

Developments In Business Simulation & Experiential Exercises, Volume 19, 1992

MULTI-CULTURAL EXPERIENTIAL LEARNING: A COMPUTER SIMULATION IN INDONESIA

Robert W. Hornaday, The University of North Carolina at Charlotte

ABSTRACT

This paper describes the introduction of a management simulation in an Indonesian Master of Management (*MM*) program during the Spring of 1991. Cultural and language differences presented special problems. Positive results included an enthusiastic student response, reevaluation of pedagogy by faculty members, and the permanent inclusion of the simulation in the curriculum.

BACKGROUND

Indonesia contains the famous "wealth of the Indies. It is one of the most important countries in the world. With a population of 180 million souls, it is the fifth largest country in the world. Its strategic location astride the trade routes between Europe and the Far East, fertile soil, and major petroleum and mineral deposits make Indonesia a potential economic and political power. Presently, Indonesia's economy is at the take-off stage. The national leadership has decided to move from a centrally planned economy to an economic strategy more reliant upon market forces [Bright Prospects... 1991].

To make this transition, all experts agree that during the next ten years Indonesia will need a new cadre of professional managers. These managers must have the managerial skills and the determination necessary to meet the demands of a global market economy. They will have to create and manage organizations that can quickly identify marketing opportunities, develop new products and services, and attract necessary capital for production facilities and marketing channels. They will have to administer the day-to-day activities of the firm, prepare strategic plans, and design organizational structure and control systems appropriate for Indonesia.

The Indonesian economy needs thousands of well-trained middle managers. Only those with the best potential can attend high quality MBA or Master of Management (MM) programs. They, upon graduation, will provide a nucleus of professional managers that will set the standards for Indonesian management [Shifts in Management, 1991].

To produce these managers, the Indonesian universities must make major changes. One of the major obstacles to be overcome is the existing academic culture at major Indonesian universities. Indonesian professors model their pedagogical behavior on the Dutch professors who provided doctoral level instruction during the colonial period, which ended only in 1962. In general, the Indonesian professor lectures and the students take notes, then spit back on tests what the professor told them. The burden of education is squarely on the student.

Another problem is that of academic salaries. Because the Ministry of Education specifies salaries for tenure track professors of equal rank and years of experience, there is no way to adjust salaries to attract and keep those faculty who can find far more lucrative employment in the private sector. Faculty members who desire to

continue teaching must hold three or four teaching positions at different universities to maintain their standard of living. Faculty research and curricula development efforts drop to near zero. A third difficulty is that Indonesian graduate education is designed to produce teachers, not practitioners. Like teacher education in the U.S. most of the graduate students are of very low quality.

All this means that the Indonesian educational system must make a large capital investment in management education to secure the facilities, libraries, computer equipment, staff, and most important, the faculty that can bring about and guide an evolution in management training. Curricula changes must be aimed at providing graduate students with the tools they need to become practitioners, not teachers. Use of the case method of instruction, computer simulations, and emphasis on student production of completed reports, plans, and proposals are examples of possible curricula changes. A similar change in management thought on the same scale occurred in the U.S. during the 1960s as a result of the Gordon and Howell Study [1959] which deplored the curricula, rigor, and faculty quality in U.S. business schools of the 1950s.

High quality management education in Indonesia is already a lucrative business, attracting many suppliers [Between Favoritism... 1991]. At the top of the market, the competition consists of five groups of institutions.

1. Indonesian Public Universities. Two of the top three Indonesian Public Universities, Gadjah Mada University (UGM) and the University of Indonesia (UI), have Master of Management Programs. The third, Bandung Institute of Technology (ITB), offers a technical MBA.

2. Private MBA Institutes in Indonesia. The best of the private ones such as The Indonesian Institute for Management Education (IPMI), Prasetya Mulya Management Institute (IMPM) and The Institute for Management Education and Development (IPPM) are usually affiliated with European MBA programs. They are not, strictly speaking, universities, but, "stand-alone" management training institutes. These programs do not offer Indonesian graduate degrees. The language of instruction at the best of the private ones is English.

3. Foreign Extension Programs in Indonesia. American universities are taking advantage of the demand for graduate management education in Indonesia. Several, such as Oklahoma State and Fresno State have set up extension programs in Jakarta. These offer U.S. MBA degrees, using a core of ex-patriot instructors from the home institution. English language skills are mandatory.

4. Corporate In-house Training in Indonesia. A few large Indonesian corporations offer management education to their employees. Some of this training is at the graduate level. Most of the corporate in-house training is designed to provide employees with functional managerial skills, for example, bank

Developments In Business Simulation & Experiential Exercises, Volume 19, 1992

controllershship, internal auditing, corporate marketing, etc.

5. Overseas Management Education. Top Indonesian students will continue to seek opportunities to study overseas for an MBA but only a few will be able to take advantage of this option. In addition to high cost, overseas MBA programs require very high scores on the Test of English as a Foreign Language (TOEFL) and over 500 on the Graduate Management Aptitude Test (GMAT). These are difficult hurdles for those who are not native English speak-ers.

All Indonesian graduate management programs use three major categories for entrance requirements: academic background, English language proficiency, and managerial experience. The Indonesian public universities attempt to maintain a balance between the three, while the foreign extension programs and private MBA programs tend to admit students who have good English language skills and managerial experience but may lack a strong undergraduate background. Corporate in-house programs emphasize of academic background and managerial experience and are not so interested in high fluency in English. Overseas study, of course, requires high academic standing and a very high level of English proficiency.

The Indonesian Ministry of Education is aware of the need to strengthen the management education programs in the public universities, using the American model of locating graduate-level programs with major universities. The goal is to develop and maintain a high quality graduate management programs at Indonesian public universities. These programs will recruit students who seek an Indonesian graduate degree (S2). So far, the Education Ministry has refused accreditation and degree-granting authority, pointing out that the privates do not require a baccalaureate degree for admittance, are not associated with Indonesian universities, and do not have qualified full-time faculty.

The strategy to achieve the goal consists of establishing self-sustaining programs that will: (1) attract the very best students in Indonesia; and (2) provide high quality management education. These two elements interact. High quality management education is not possible without high quality students and high quality students will go elsewhere if high quality management education is not offered.

In line with this strategy Master of Management (MM) Programs were established at University of Indonesia (UI) in Jakarta and Gadjah Mada University (UGM) in Yogyakarta in 1988. The MM programs offer full-fledged Indonesian graduate degrees.

THE MASTER OF MANAGEMENT PROGRAM AT GADJAH MADA UNIVERSITY

Gadjah Mada University (UGM) is the largest university in Indonesia (25,000 students). Located in the cultural center of Yogyakarta, UGM competes with the University of Indonesia in Jakarta for the best students in Indonesia. About 75% of the UGM Economics Faculty hold graduate degrees from U.S. or European universities. The UGM Economics Faculty contains three departments: Economics, Management, and Accounting, all offering undergraduate (S1), master's (S2), and doctoral (S3) degrees.

The Master of Management (MM) Program is separate from these, both pedagogically and administratively. While technically belonging to the Graduate Faculty and housed with the Economics

Faculty, in practice the P41 program operates independently of UGM. It is monitored directly from the Ministry of Education in Jakarta.

There are four faculty members assigned to administer the MM Program. The Director of MM has an MBA from the University of Michigan. His deputy has a Ph.D. in accounting from the University of Kentucky. The other two have MBAs from Leuven (Belgium). These four are supported by a staff of nine. Two of these, the chief of academic support and the computer "expert" are extremely well-qualified and get things done right and on time.

*1 students at UGM are the cream of the crop. They have high-test scores and undergraduate grades. About a third of the students are university instructors (mainly economics), a third government employees and a third from the private sector. Entrance is strictly by merit. Only 30% of the current class graduated from the three big Indonesian universities (UI, ITB, & UGM). The rest are from less prestigious universities. English skills of the MM student's range from excellent to adequate. MM requires a TOEFL score of 450 and a score of 550 on the Indonesian Graduate Aptitude test. Surprisingly, for a Moslem country, about 40% of the students are women.

Tuition is \$7200 per year (13 months) which includes books and a snack lunch, but no room and board. Because of the high tuition, MM takes great pains to treat their student's as if they are very special, which they are. In the 199-1992 academic year MM will enroll over 100 students whose tuition payments will be in excess of \$700,000 _ a large sum in Indonesia. Unlike the rest of the university, the 144 program is authorized to raise funds from private sources. This it does with a vengeance. A new MM building opened in July 1991 complete with furnishings, office equipment and computer labs funded entirely by donations from private firms.

MM is an intensive lock-step program. Students start the four-quarter program together and continue through 13 months with only a few two or three-day breaks. MM does not shut down between quarters, as does the rest of the university. Beginning in Fall 1991, 144 classes will start in July and January. Class attendance is expected. An official roster is maintained each day. Students select from two concentrations: Investment and Banking or Agribusiness.

The curriculum includes the normal core courses found in a U.S. MBA program plus two courses in "government policies." Lecturers are drawn primarily from the Economics Faculty, with a few from other faculties. There are two or three lecturers from the private sector who fly in from Jakarta. The MM staff is trying to encourage the use of the case method of instruction. So far they have been successful only in the Business Policy course and one or two other courses. Even though all the teaching faculty have Western degrees (mostly MBAs) they are reluctant to abandon the lecture/test method. In short, students take lots of tests and diligently seek the "correct" answers to problems. Tests receive merciless grading. Forty per cent of the Fall 1990 class will have to repeat some courses before they graduate.

The MM staff are well aware that they need to shift to pedagogical techniques that require more student participation. They are actively encouraging professors to use the case method of instruction. When the author arrived at UGM on a Fulbright Grant, the P44 Director enthusiastically endorsed the introduction of a computer simulation.

Developments In Business Simulation & Experiential Exercises, Volume 19, 1992

THE MULTI-NATIONAL GAME AT GADJAH MADA

The author, who has used management simulations in business policy courses for 12 years, arrived at UGM in January 1991. The Personal Computer version of the Multi-National Game (MNG) [Edge, Keyes & Remus, 1985] was selected for use in Indonesia. MNG simulates a manufacturing firm based in the U.S. with wholly owned subsidiaries in Japan and Germany. Manufacturing and marketing are possible in all three countries, but shares of stock can be sold and dividends paid only in the U.S. The firms manufacture two products: Product A, a high profit consumer item, and Product B, a subassembly sold to other end item manufacturer. The products manufactured by the firm can be freely shipped between all three countries, but capital (money) can only be transferred by means of inter-company loans. Each student team must enter 12 decisions each quarter for each branch. MNG "industries" are limited to no more than eight firms in direct competition.

Fifty six MM students (divided into two sections) pursuing the Investment and Banking concentration participated in the MNG simulation. Each section was divided into seven four-member teams. Section 1 was the "Putih (white) industry; Section 2 the "Merah" (Red) Industry. The teams entered their decisions on a PC, then turned in a diskette so that the simulation could be "run." Results were printed on a dot matrix printer and returned to the students the day after they turned in their decisions.

The simulation lasted 12 calendar weeks. For the first four weeks, MNG classes met twice each week; for the last eight weeks, only once per week. Students participated in four practice decisions for familiarization. After the practice decisions, students prepared a written strategic plan for the eight quarters of the actual competition, including pro forma income statements, balance sheets and cash flow for the first four quarters. The financial statements were prepared with the assistance of a spreadsheet prepared by the author. The students then entered one decision per week for eight weeks.

At the end of the simulation, each student team prepared a report to shareholders describing the results they achieved during the eight quarters. Based upon this report, each student team made an oral presentation to the class as a whole. For the student plans and report, the author provided fairly detailed comments on separate sheet explaining the strengths and weaknesses of the paper. The simulation counted 100 course points: 60 points for the competition performance (earnings, stock price, ROI, etc.) and 20 points each for the MNG plan and MNG report.

Halfway through the competition, three changes in the outside environment forced the teams to reconsider their goals and strategies. First, an "agreement" between the U.S. and Japan limited the shipment of Product A (the high-profit consumer item) from Japan to the U.S. to 3000 units per quarter. Next, labor union demands in the U.S. forced firms to maintain 3000 units of production capacity in the U.S. or face substantial quarterly fines. The third environmental change was the shut-down of production facilities in Germany by the "Green" political party during the sixth quarter. Most of the student teams successfully scrambled and adjusted to the new conditions.

This version of MNG presented a few technical problems that hampered administration. The user's manual for this edition of MNG is poorly written and organized, even for native English

speakers. For the MM student's to make sense out of the manual was an unnecessary hurdle. To get around the problem, the author extracted the necessary information from the manual and provided it to the students in a tabular format. There were several print errors in the computer routines and the setup program deleted "active" industries. Since the author had used MNG in the U.S. for three years, these minor glitches caused only temporary delays.

PROBLEMS WITH CULTURE AND LANGUAGE

Although the author had served for three years as a military attaché at the U.S. Embassy in Jakarta and had an intermediate level of skill in Bahasa Indonesia, this was his first attempt to teach at a civilian university. Accordingly, he carefully reviewed the "teaching tips" provided by the U.S. Information Service, reports from other Fulbright Lecturers and talked by telephone to those who had recent experience at Gadjah Mada. These sources warned that Indonesian graduate students were passive and reticent to challenge each other or the professor in class discussions. These American "experts" judged that the research and writing skills of Indonesian graduate students were far inferior to those of comparable U.S. graduate students. In short, the author expected some difficulty in getting Indonesian graduate students to pursue the aggressive approach to learning necessary in a simulation.

On top of this bleak assessment of student inclinations and capabilities, the Moslem fasting month of Ramadan occurred right in the middle of the simulation. During this time devout Moslems neither eat nor drink during daylight hours. Indonesia has more Moslems than any other country. Needless to say, things slow to a crawl, even among the not-so-devout Moslem population.

In addition to cultural differences, language differences had to be overcome. Bahasa Indonesia, the Indonesian Language is a version of Malay and is the official Language of Indonesia. For the majority of Indonesians, however, the "mother tongue" is Javanese, Sundanese, or some other regional language. They learn Bahasa Indonesia in school. To be admitted to the UGM MM Program, students must also demonstrate English language proficiency by scoring high on the TOEFL. The author, a native English speaker, brought an intermediate level of skill in Bahasa Indonesia to the classroom. It became apparent very early that the author's skill in Bahasa Indonesia was not good enough for lecturing. He would have to use English. Unfortunately, the English language skills of about one half of the classes were not good enough to understand the lectures. What to do?

When using a second language the easiest thing to do is reading - closely followed by listening. The most difficult functions are writing and speaking, in that order. A grand compromise taking these difficulty levels into consideration allowed the simulation to proceed successfully. During the first two weeks, the author would lecture and explain simulation procedures using English. But questions and answers in class were in Bahasa Indonesia. Written materials written by the author were in English. Plans and reports written by the students were in Bahasa Indonesia. It worked like a charm. Language disappeared as an obstacle.

RESULTS

Results of the MNG far exceeded the author's expectations. The students worked hard during the competition. The quality of their written plans and reports was

Developments In Business Simulation & Experiential Exercises, Volume 19, 1992

equal to that of U.S. MBA students. Their oral presentations were superior to those normally produced by U.S. MBA students. Written student evaluations showed that the simulation was wildly popular.

Contrary to what the "experts" had predicted, the MM students dived into the simulation with vigor and aggressiveness. They seemed to revel in the competitive aspects of MNG. In particular they liked the idea of "fast feedback", getting their results back only 12 hours after they submitted their decisions. The MM students were rather raucous in class and there was much loud teasing and joking about teams that made errors.

The oral presentations prepared by MNG teams were superior. They were well rehearsed and used excellent visual aids. Four of the teams used software similar to "Story Book" to project excellent computer graphics on a screen visible to the whole class.

The MM Director, convinced of the value of the simulation, assigned two young accounting faculty members to administer MNG in the MM Program next year. The author spent three weeks training these two professors, with particular emphasis on the importance of quick and accurate feedback to the students.

DISCUSSION

The simulation was a new experience for the MM students. They had never seen anything like it. The specter of a "real" professor (as opposed to a Computer technician) leading them through a spreadsheet in the computer lab caused disbelief, embarrassed laughter, then some real progress in learning. The MM students did not hesitate to come to my office to clear up questions they had about the simulation.

One of the major surprises of the simulation was the student reaction to the grading system. Before the simulation began, the author explained in great detail exactly how performance in the simulation would be evaluated. Each team received a score sheet for their plans and reports indicating which parts were good and which parts were bad. The Author made himself easily available to explain the results to any students who had questions. The students reacted with surprise and delight at this system of evaluation. They entered into enthusiastic discussions with the author in the classroom, the hallways, and the office about the performance of their teams and their gripes about the grades they received.

This was in great contrast to the "usual" grading practices in the 144 program. It seems that Indonesian professors grade tests and papers with no comments, reporting the grades to the MM administration. Students must ask to learn their grades and, if they wish an explanation, get an appointment with the professor who does not provide a detailed critique, only general comments about the grade assigned.

Vigorous debate and discussion was generated by the oral presentations. Unlike U.S. MBA students who rarely criticize the work of the fellow classmates, the MM students had heated though friendly exchanges. One such exchange highlighted the cultural problems of changing to a market system. The most successful MNG team had lowered prices drastically during the last quarter of competition, taking market share away from some of the weaker teams. During the oral presentation, these teams complained that the stronger team had ignored the Indonesian custom of "mutual

cooperation to help the underdog" by slashing prices. The stronger team responded by asking who they were supposed to help. They had not cut their prices below costs, in fact their price-cutting strategy had increased their profits. At the same time they had provided a high quality product at a lower price to their customers. That, they asserted, provided ore help to the "underdog" consumers than keeping prices artificially high to protect their less efficient competitors. An animated general discussion followed involving the whole class concerning what a market economy can and should do in a developing country such as Indonesia.

LESSONS LEARNED

Several lessons emerge from this experience which may be of help to those who have the opportunity to teach in a multi-cultural environment overseas.

1. Be skeptical of "expert" opinion. Not much advice provided by U.S. "experts" on Indonesian graduate education was correct. Keep an open mind and draw your own conclusions about students and your faculty colleagues. Above all, be optimistic and expect the best - the "glass" is probably half full, not half-empty.

2. The broad effects of new pedagogy. The success of the simulation provided a way of discussing new ways of teaching without relying completely on criticism of the lecture/test method. The enthusiastic response of the MM students to the simulation provided an example of the possibilities of experiential learning. Other faculty members began to seriously discuss the use of in-class exercises, cases, and student reports to supplement and replace the old method of exclusive reliance on tests.

3. Be prepared for unexpected results. Student reaction to the simulation grading method has provided the catalyst for the MM staff to re-think the grading system used in other courses.

4. Know your stuff. Living conditions are fairly tough in a developing country. Mail is slow and unreliable. Don't try to use anything new. Use methods you are familiar with that have worked in the U.S. Bring the hardware you need, laptop and printer. Be ready to go when you hit the ground.

Obviously, from the tone of this report, the author enjoyed his stay at Gadjah Mada. The favorable response of the MM students and faculty to the simulation far exceeded his expectations. It is hoped that this report will be helpful to those who are interested in multi-cultural pedagogy.

REFERENCES

- Between favoritism and accreditation Prospek, June 22, 1991, 84-95.
- Bright prospects for MBA programs. Bisnis Indonesia, April 5, 1991, 9.
- Edge, Alfred G.; Keys, Bernard; and Remus, William E. The multinational lame, 2nd Edition Business Publications, Inc., 1985.
- Gordon, Robert A. and Howell, James E. Higher education for business New York: Columbia University Press, 1959.
- Shifts in management. Prospek, May 4, 1991, 84-95.