015-0995

# Student Research Programs in Greater China:

# Overview and Experience from a SCM Research Methodology Course

Dr. Martin Stößlein

Jilin University / School of Management

5988 Renmin Street

130022 Changchun, P.R. China

(135) 151 136 55


University of Dayton / Department of MIS, Operations Management, & Decision Sciences

300 College Park

Dayton, OH  45469-2130

stoessma@udayton.edu

(937) 229-5427

**POMS 21st Annual Conference,**

**Vancouver, Canada**

**May 7 to May 10, 2010**

# Student Research Programs in Greater China:

# Overview and Experience from a SCM Research Methodology Course

After a brief comparison of Student Research Programs (SRPs) in Greater China with those in the U.S., we describe our endeavors to provide *active research experiences* at Jilin University (P.R. China). Although SRPs are increasingly discussed as an "innovative" teaching model among scholars and policy makers in the Chinese mainland, implementations and student perceptions are rarely published. We therefore present the design and pedagogical features of our programs and its effectiveness. A repeated experience with structured course format, including a high degree of "thinking and writing" workshops, personal coaching sessions, and a 'student research conference', has been encouraging. Lessons learned could help to develop research-based courses to an audience with a range of previous knowledge, skill-sets, interests, available time, and cultural backgrounds.

# 1  Problem Situation and Motivation

Business education in the People's Republic of China is mostly teacher-centered and rarely student-centered (e.g., Yunkuo 2000), tending to follow the traditional (i.e., passive) way of student learning that hardly promotes independent learning skills and innovative thinking capabilities (e.g., Zhang 2008, Zhou 2008). Knowledge is acquired through observation, recall, memory, imitation and replication. Unsurprisingly, the training a business student receives on campus often fails to match the expectations of the industry (e.g., Li and Zhang 2009). Consequently, the educational system is on trial and is being scrutinized by educational experts, leading to a number of observable academic trends in Greater China:

a)  The Ministry of Education on Chinese Mainland promotes "innovative" [here in the sense of 'new'] and quality teaching methods" formulated in the so-called 'national undergraduate innovative experiment plan' (University of Science and Technology 2007).

b)  Taiwan's Ministry of Education aims at upgrading teaching techniques with teacher training, and actively promotes "diverse and innovative educational activities". (Taiwan's Ministry of Education 2009, 11-12.)

c)  The Curriculum Development Council in Hong Kong suggests a learning process, "in which, students are active constructors of knowledge and the teacher is a facilitator of learning. Instead of the teacher giving the right answers, students have to raise questions, find their own answers and look for the necessary information." (Curriculum Development Council 2002, 69).

Among several state-of-the-art techniques of the pedagogical toolbox, Student Research Programs (SRPs) seem a promising, albeit challenging, option for bringing higher education to a superior level, in particular at undergraduate level. Since SRPs aim to cultivate and advance the promotion of long-term creative and critical thinking, students are highly prepared for analyzing and problem-solving in business life.

## 2   Educational Research Objectives

Inspired by educational developments and lively discussion among scholars and decision makers in the Chinese Mainland about "innovative teaching methods", the overall goal of our educational research is to explore the benefits of engaging all students in research and to propose curriculum improvement opportunities.

Since adopting a modified teaching approach is only successful when specific infrastructures are considered, simply copying successful teaching models from the U.S. or Germany might not work in the Chinese mainland with its diverse student and teaching resources. Accordingly, a modified teaching 'strategy' must be carefully devised for each institution, for which we seek to investigate critical factors and pragmatic implementation steps.

In this paper, we provide an impression of SRPs in China (section 2) and of experiences gained by combining a case-oriented course with student research opportunities (section 3). To the best of our knowledge, this course at Jilin University is the first at a Chinese university providing a highly formalized SRP with the high degree of coaching and student service features described in section 4. Our preliminary evaluation of the course effectiveness is based on student perceptions (section 5).

This is not our first adventure in teaching models; we are building on the experience of integrating research-based and simulation-based teaching in the supply chain strategy course at the University of Dayton (see Stößlein and Kanet 2008).

## 3   Overview of Student Research Programs in Greater China

While SRPs have been applied in various disciplines across the U.S., the U.K., Germany, Japan, Thailand and Australia, the teaching approach is less well established in Greater China. Exceptions are leading research institutions in Mainland China (e.g., Tsinghua University, Shanghai Jiaotong University), which launched first experiments with SRPs

around 2000. Good practices can also be observed at selected institutions in Hong Kong and Taiwan (for details see Stößlein 2010 forthcoming).

In P.R. China, research opportunities are typically restricted to a group of up to three highly selected undergraduates (following the "elite education" paradigm), supported by government funds, and informally guided by faculty. Students prepare research reports of around 5,000 words and need to defend their findings in 10-minute presentations (including discussion) in front of an invited group of faculty who finally grade the student's work. Research results are hardly ever published by students. By contrast, many U.S. undergraduates undertake individual research projects, enjoy formal research training sessions, get the opportunity to publish their research findings in abstract booklets or even journals, and to present papers at student conferences (e.g., nationwide student celebrations attract around 2,000 participants each year). Furthermore, U.S. student research is more independent from funding, reflecting Humboldt's idea that universities should remain free of state patronage or any other constricting conditions.

In Mandarin-language written literature, Chinese scholars consider the use of SRPs (highlighting often the three best-practice examples of undergraduate research programs at M.I.T., UCLA, and UC Berkeley). However, this tends to be limited to dissemination of general data about their SRPs (e.g., the number of started projects and students involved) rather than comprehensive information about what students think about the program or about which initiatives worked or not (for details see Stößlein 2010 forthcoming). Consequently, instructors may feel left alone to design courses including research opportunities.

The overall teaching practice and learning habits (foundations on which SRPs need to be built), might be regarded as the biggest and well-known differences. Since students in Mainland China are accustomed to being taught in often-overcrowded classrooms in a more authoritarian teaching style, student questioning and lively discussions are rare. This is in

contrast - even diametrical contrast - to education in North America and Western Europe, which is traditionally based on a teaching style that fosters independent research, creative and critical thinking, and envisions an *active* student role through participation and discussion in class. Thus, it seems that the biggest challenge to the implementation of SRPs is how to bridge the educational gap from cultural notions.

## 4   Course Description and Activities

### 4.1    Course Objectives

*Active student research experiences* have been integrated into a course focusing on empirical research methodologies in supply chain & operations management (SC&OM) at Jilin University, a leading university in China. The course is part of the university's continuing effort to expose students to leading-edge teaching and research in the popular field of Operations Management as applied in the North American and West European research communities. Therefore, learners have been exposed to a student-centered teaching style stressing reflective inquiry through questioning and reflection.

In order to provide learning opportunities to all students, there were no pre-requisites or prior qualifications needed. Thus, participants came from all business departments. However, we needed to limit the number of learners to 50 to ensure that everyone attending the sessions benefited as much as possible. To gain a composite picture of the student situation and learning progress, and to fine-tune our pedagogical strategy, we administered surveys before, during, and after the *active student research experience*.

The course was offered in ten 3-hour lectures and five 3-hour workshops. Additional one-on-one coaching during office hours (around 8 instruction hours per week) extended the teaching time.

Although presence at all sessions was not obligatory, we made clear the benefits of

attendance with the following analogy: If Chinese children in the first school year miss the opportunity to learn how to pronounce certain sounds, e.g., to distinguish between "chang" and "chan", they may well not catch up later, and as adults they may have difficulty in typing text messages on cell phones requiring the correct input of letters. Furthermore, we also stressed that the provision of lecture notes was not intended to be a substitute for the training sessions, but rather to save students' time and effort in taking notes during class time.

## 4.2    Learning Outcomes

Through the combination of a case-oriented course with *active student research experiences* we aimed to enhance learners' management knowledge, skills, and problem-solving abilities. Specifically, upon completion of the course students were expected to have the ability to demonstrate awareness of the range of empirical methods for research problems in the SC&OM arena, to exercise creative and critical thinking skills, to explain a chosen quantitative research methodology, and to communicate professionally research problems and their possible solutions to different recipients in both oral and written form.

The aim of this course was not to develop professional empirical researchers, as that would require a more intensive program - introductory courses for structural equation modeling (including Lisrel or SPSS Amos training) can already take one semester - rather, the course objectives were to expose students to a range of advanced methods in cracking SCM problems. Ultimately, learners should become skilled at how to construct their own "world of knowledge". The research opportunities presented gave all students a learning platform to further specialize on a topic of their choice and interest, helping to make them unique and outstanding in the job market.

## 4.3    Detailed SRP Features

The course was a mixture of cases and examples, methods and skill training, quizzes, and frequently-asked-question sessions. To give students confidence and motivation by reinforcing their strengths and opening up new ways for them to succeed, we provided

5

guidance during their *active* research experience that was easy to understand and as pragmatic as possible without neglecting the rigor of inquiry. A series of formal research sessions and workshops aimed at enhancing their thinking, writing, and presentation skills - as described in detail below.

### 4.3.1 Getting-Started Meeting

To kick off proceedings, we specially designed student research topics for the purpose of the course, and also encouraged participants to suggest their own ideas. Following lessons learned from similar course formats (e.g., at M.I.T.), research requirements were carefully adjusted to the appropriate level of the attendees in order neither to overwhelm them nor to bore them rigid!

The introductory session illustrated good practice in getting started, identifying a research problem, developing and refining hypotheses, evaluating possible methods, and, optionally, taking advantage of software packages.

### 4.3.2 Research Process Sessions

To immerse students into the role of a researcher, we explored various definitions of research (what it is and what it is not), and how we know what we know. A historical sketch brought across what research meant to Socrates, Aristotle, Descartes, Planck and Heidegger, to name but a few. In terms of focus on SCM research, we highlighted an article by Gupta and others who investigated the types of articles published from 1992 to 2005 years in the POMS Journal; this revealed that articles based on empirical data have increased substantially, from 30 to 50 percent. This also enabled us to introduce the most frequently used data-analysis approaches.

Once students recognize the nature of empirical research they are able to identify relevant skills. Thus, we introduced types of scientific research in regard to applications, objectives, and inquiry mode, and familiarized students with typical phases of a research project, such as:

the "exploration phase" (How to find a research project. How to formulate research questions.); the "theory phase" (How to write a literature review. How to evaluate data sources. Why developing theory can be difficult. How to develop good theory.); the "method phase" (How to determine the 'right' empirical method.), and the "analysis phase" (How to analyze and interpret data.). The content was summarized not only by checklists but also by examples of bad practice (How to write a *bad* Literature Review. How to develop *bad* theory.).

For the survey process, we discussed and evaluated the ways Chinese researchers develop questionnaires, and highlighted that mistakes made in data collection and analysis were nearly impossible to correct at a later stage.

### 4.3.3    Readings & Discussion Sessions

Reading and discussion sessions gave attendees opportunities to learn and talk in-depth about one or several scholarly manuscripts. To increase student motivation, we introduced the papers by a summary with abstracts, hypotheses and path models.

### 4.3.4    Role-Playing Activities

Through role-playing exercises, students had an opportunity not only to deepen their learning experience, but also to practice empathy, compassion, and communication skills. For example, in the "how-to-think-as" series students acted as Aristotle and Euthydemus, which demonstrated how to seek self-knowledge by critical questioning and triggering self-reflection of intended decisions.

### 4.3.5    Technical Briefings

In technical briefings, we presented typical empirical problems and solutions across several industries, e.g., automotives, food, and telecommunications, through annotated examples, together with statistical output achieved by contemporary statistical software packages. Many of the assigned exercises required the use of a computer in class. To immerse students into

the problem situation, we highlighted manager roles, decision questions, and their task as a student researcher acting as consultant.

It should be noted that students were provided with an overview of statistical software packages only after the theory was explained with a calculation example. However, this approach frustrated some students who believed that a statistical software program can do the analysis on its own.

### 4.3.6    Research Ethics Workshops

The aims of the workshop were to give a sketch about what is meant by 'ethics', why we need to consider ethics in the research context, and to identify potential sources of ethical problems in research. Topics covered also included ethical theory and ethical issues in international research. For example, we touched on how to do good statistics (referring to the Ethical Guidelines for Statistical Practice from the American Statistical Association). Particular attention was given to the problem of plagiarism by shedding light on rules and guidelines on how to avoid plagiarism and giving credit where it is due.

### 4.3.7    Research Proposal Writing Sessions

The materials showcased are chosen specifically to help students understand and explain the role of a research proposal. We discussed a typically required structure of award-winning research proposals in business (e.g., for the National Natural Science Foundation of China). Topics covered included the so-called "Heilmeier Catechism" questions that should be answered when planning to submit a proposal to a funding agency. Checklists summarized how a reviewer evaluates whether the research idea is a promising idea, the definition of a promising idea being one with the potential to get financed.

### 4.3.8    Creative Thinking Activities

The objective of the workshop was to give students the ability to "think outside the box" - literally at the snap of their fingers. In this session, students learned how to stimulate thinking

and to modify self-imposed constraints through brainstorming techniques. Exercises such as freewriting, clustering, mindmapping, and journalistic questioning (e.g., the "why"-question) were practiced in small groups. Furthermore, tips were provided how to reward, nurture and foster their own culture of creating new ideas.

### 4.3.9    English Writing and Editing Workshops

Without doubt, writing a research paper is often a daunting task for students, particularly if they have to prepare it in a foreign language. By dividing the writing process into easy, manageable steps and by providing both checklists and individual guidance to accomplish each milestone, this session aimed at making writing a paper a less intimidating task. Each non-native speaker of English should thus return home with a series of specific writing techniques. We therefore assisted their "research-writing-by-doing" process step-by-step with tips on how to develop a solid abstract (informative vs. descriptive), a table of contents, a clear and correct argument, creative statements etc. For example, students acquired skills on how to write a good paper, e.g., how to know what to include and what to leave out, how to organize research findings to best effect, and what to look for in the beginning, the middle, and end of the paper. We also made clear that writing is "rewriting", and that the most powerful way to improve writing is through constructive feedback sessions (see section 4.3.16).

We reasoned that too much of a good thing could dampen the enthusiasm of many students. Thus, we decided to provide tips sequentially: basic (e.g., keywords which link thoughts and give directions), advanced (e.g., selected grammar rules), and professional tips (e.g., word choice).

### 4.3.10  English Proofreading Workshops

The first draft of a research report is hardly ever ready for its debut. We highlighted the fact that scholars not seldom spend the same time polishing a rough research piece into a finished, accurate and readable manuscript as they do drafting the research paper itself. In order to

make this workshop less "painful" to students, we gave course participants a concise reminder of some core scientific writing conventions and contemporary grammar and punctuation rules in order to strengthen their fight against blurred language. In particular, we dealt with frequently observed writing problems by Chinese students (highlighted in English books for Chinese learners).

Ways to improve sentence structure were also covered with sentence-correction exercises dealing with how to avoid using the passive voice, "to be" verbs and how to fix "run-on" sentences. Moreover, "Plain English" exercises further helped students to use precise, straightforward language, to avoid jargon, clichés, misleading metaphors, overused and superfluous phrases. Furthermore, the workshops included tips and exercises on how to check assumptions, inferences, and the strengths and weaknesses of arguments. Material was mainly adopted from GMAT books and research writing training books.

### 4.3.11 Publishing Sessions

Students recognized that finalizing a research paper is just the first step; equally important is the ability to find a "home" for the intended publication and to refine further the scholarly manuscript according to the requirements of appropriate journals. We therefore gave practical hints on how to select and target quality journals, and compared the publication practice of U.S., European, and Chinese scholars. For example, the pros and cons of predominantly submitting to SCI and SSCI-journals were discussed.

### 4.3.12 Paper Reviewing Sessions

Students had the opportunity to switch into the role of reviewer. Attendees critically examine scientific writing structures and conventions, while checklists classify typical review criteria that specify requirements regarding rigor and relevance. Based on the provided framework, the qualities and merits of excellent papers compared to less rigorous papers were discussed. We also touched on the rigor-relevance debate in the scientific community.

### 4.3.13 Time Management Workshops

Since it is virtually impossible to write a research paper in a single burst of creativity, requiring instead numerous steps undertaken deliberately and sequentially, we gave tips on streamlining research working efforts. In this workshop, students learned how to establish priorities, manage time efficiently, organize their work space, and use their writing time more effectively. Specific techniques and examples provided illustrations on how to take advantage of their time throughout the semester through weekly and daily research planning activities that allow them to realize their academic goal.

### 4.3.14 Defeating Procrastination Workshops

Research involvement is unlike any task course participants have previously attempted, requiring particular skills, abilities and certain working habits and ethics that may be less familiar to them. Consequently, many students encounter "writer's block" and stress when deadlines loom. Thus, we addressed some of the most frequently encountered difficulties and reasons students experience while preparing a research paper, such as academic procrastination. Topics covered included strategies, examples, and self-assessment exercises to minimize these potential problems. We also educated attendees about techniques that elite-level athletes use to manage stress in order to enter the relaxed and focused state necessary to achieve excellent performance.

### 4.3.15 Self Assessment Workshops

Since timely constructive feedback helps participants keep engaged, focused and motivated, we provided checklists in the compact student manual. The checklists were structured to relate directly to the life-cycle of the research project. Well-known self-assessment inventories are used to assist students in determining their interests, research progress and potential, as well as possible writing barriers. A positive side effect of the workshop was that the attendees consequently understood the expected level of efforts and performance.

### 4.3.16 Individual Feedback Sessions

Personal feedback was offered in weekly to biweekly one-on-one status meetings lasting 5 to 20 minutes for each participant. We carefully made sure that we gave high-performing students productive feedback without appearing to be nit-picky or over-demanding.

To increase productivity of feedback sessions, we introduced in class the value of constructive feedback for the research process with the following questions: Why get feedback on your writing? When might students need feedback? (e.g., at the idea stage, early polished draft), Why students don't ask for feedback? What kinds of feedback can students ask for? (e.g., paper organization, "flow", grammar). What should students do with the feedback they get?

### 4.3.17 Research Poster Presentation Workshops

To give students a 'jump start', they received checklists on how to prepare a good poster, and how to avoid common mistakes. For example, we dealt with the structural and stylistic techniques needed to help students organize their presentation so that their audience can follow it. We also highlighted the characteristics that distinguish a winning poster. Additionally, tips from an art studio about visual design were included.

### 4.3.18 Research Presentation Workshops

Although students received checklists (e.g., how to prepare slides, and how to deliver the message effectively), we recognized the value of real-world examples. Therefore, attendees watched a series of video vignettes in which English native students acted in two ways to present an idea: one with shortcomings, the second correcting these shortcomings. The videos helped presenters to understand the benefit of using keywords or phrases on slides, to avoid annoying mannerisms, and not to overestimate the knowledge of their audience. The material was offered by a project funded by the U.S. National Science Foundation. As practical exercises, each participant was expected to give 1-minute and 3-minute presentations covering his or her favorite empirical article or scientific researcher. Students also took

advantage from our speech-writing tips to deliver a strong speech from the very first moment, such as how to write a good opening and a good closing, and how to take advantage of the power of story-telling in a speech.

### 4.3.19  Student Research Conference

Since we are convinced that the intellectual findings of student researchers are often valuable to both academics and practitioners, we organized a student research conference at the end of the semester, held on two days over a weekend. The conference started with short welcome speeches, with an award ceremony after the student presentations, finally ending with a dinner at the Shangri-La Hotel.

The conference aimed at celebrating the students' finished projects by showcasing their findings in 15-minute presentations. We announced the conference program through personalized invitations and newsletter, on the course website, and posters on the campus.

The student presentations for winter 2009 were structured into several tracks that also build a bridge from core SC&OM to corporate finance, information systems, research and development, marketing and sales. For example, topics included how psychological effects influence a quality improvement project, how supply-chain information-sharing impacts manufacturer performance, or which recall strategy is the most suitable during a product crisis.

### 4.3.20  Student Research Conference Proceedings

Students' research reports were assembled into a conference proceedings volume, edited and produced by the instructor, intended to share student research findings with course participants, interested students, faculty inside and outside the institution, and selected business partners. Students appreciated the opportunity to list the publication on their resume for applications, and to hand out their work to friends and family.

### 4.3.21 Student Awards

It has been repeatedly verified that the use of awards enhances student motivation, leading to superior performance. The top-10-ranked course participants had the opportunity to earn awards for their efforts on the final research paper and presentations. Additionally, course participants voted for the best-paper award, while the entire audience decided on the students' choice best presentation award.

## 5 Preliminary Assessment of the Student Research Program

### 5.1 Objective

We aimed to determine the effect of the SRP on students' knowledge, problem-solving skills, and degree of satisfaction. The results indicate whether students are in favor of *active* research experiences compared to a traditional technique-based course with end-to-chapter exercises and final examination. Feedback can also improve learning experience in subsequent classes.

A foundation for measuring course effectiveness was served by the model proposed by Kanet and Barut (2003), which we have successfully used in previous educational research projects (see Kanet and Stößlein 2008, Stößlein and Kanet 2008).

### 5.2 Survey Instrument

As a survey instrument, we designed questionnaires with a 5-item Likert scale with response options ranging from "strongly agree" to "strongly disagree." To avoid misunderstandings, we translated each questionnaire item and response option into Mandarin. We collected feedback before, during, and after the learning experience in order to compare results pair-wise. Although all students were asked to complete the survey instrument, participation was voluntary.

To report on our preliminary assessment in this paper (for details see Stößlein 2010

forthcoming), we used the survey results of:

a) the final evaluation, and

b) the student conference.

## 5.3    Selected Results

Preliminary results indicate that the SRP improves students' knowledge and problem-solving skills, and also their degree of satisfaction. Equally importantly, participants have a strong tendency to appreciate the modified teaching style. According to the survey, students envision that the student research conference concept could also conceivably be applied to other subject areas. Although an exceptionally high degree of satisfaction was perceived with the student celebration, we still see room for further professionalization of the conference experience.

| 1. Construct: Knowledge and Problem-solving Skills | Mean |
|---|---|
| This course prepared you ... | |
| ... to understand the variety of research methodologies [in supply chain management]. | 4.8 |
| ... to gain insight into a scientific problem and try to find solutions under guidance. | 4.5 |
| **2. Construct: Teaching Style** | |
| After this course, I personally prefer... | |
| ... a teaching style that starts by explaining methods, exemplifying them in the next steps and then giving relevant assignments. | 2.9 |
| ... This type of teaching style is valuable for life in business/research. | 3.0 |
| ... a teaching style that starts by outlining a research issue and then gives you an opportunity to investigate it for several weeks under guidance (student research projects and conference). | 4.6 |
| This type of teaching style is valuable for life in business/research. | 4.6 |
| **3. Construct: Degree of Satisfaction** | |
| I enjoyed discussions with the instructor in class. | 4.5 |
| I became more and more an independent learner. | 4.4 |
| The research workshops with its "thinking", writing, and presentation tips helps me in my further study. | 4.7 |
| This course is more challenging than other courses. | 4.8 |
| **4. Student Research Conference** | |
| I think the research conference is a special event for students. | 4,8 |
| I like the idea to give students the opportunity to do research and present their findings on a conference. | 4,7 |
| The conference was well organized and structured. | 4,6 |
| I liked the award ceremony. | 4,4 |
| It would be a good idea to offer 'student research conferences' in also in other courses. | 4,8 |

Table 1: Selected preliminary results

We are aware of the limits of the preliminary study. Nevertheless, although the assessment is at an early stage (SRP has been offered in the course since 2008), a longer study would be

appropriate, and with more advanced study designs (e.g., control groups), the achievements may serve as a first step for the support of educational change towards *active student research experiences* under enhanced faculty guidance. Similar promising experiences have been made with research opportunities offered in a Supply Chain Management Strategy course at the University of Dayton (see Stößlein and Kanet 2008 for details).

By and large, it seems students appreciated this new learning platform. Nevertheless, we have observed that students perceive critical thinking - unsurprisingly - to be more cumbersome than the spouting back word-by-word of what they grasp from a textbook or their instructor's lips. As some students have still tried to copy whole paragraphs from text documents or to unthinkingly cite Wikipedia sources, or have even tried to re-use findings of other faculties' projects, we are considering fine-tuning the course with the following:

a) Before the SRP begins, integrating "taster active research experiences" into courses for first-semester students, co-chaired by Chinese instructors.

b) Providing selected research workshops by Chinese student mentors before the SRP starts (e.g., organized by a Student Research Learning Center).

c) Individualizing active student research experiences for two levels of students based on their previous performance and available time.

d) Offering extended *active* research opportunities for the top 10 of a SRP (e.g., in student consulting projects).

Of course, one man's meat is another man's poison: since the detailed course design needs constantly to be adjusted to allow for student needs, such a course can take longer faculty preparation time, and requires more teaching resources efforts than simply offering a traditional technique-based course.

# 6 Conclusion

In this paper, we touched on some differences between student research programs in Greater China and the U.S. One core feature that we have found is the extent of personal coaching and tailored mentoring efforts (e.g., in workshops) that American students enjoy in leveraging their research experience.

The SRP offered at JLU reflects a marked change in teaching empirical research and supply chain management in China. At its core, the *active student research experience* and enhanced interaction between an instructor and course participants provides a pioneering role to students in this context. Given the positive feedback received, it is reasonable to conclude that the modified teaching strategy seems to be effective - we plan to continue to promote its use in management education in Greater China.

# References

Curriculum Development Council (Ed.): Curriculum Guide for Primary Schools: General Studies. Hong Kong: The Printing Department, 2002.

Li T., Zhang, Z.: Developing Undergraduate Students in Industry and Commercial Management - Problems and Solutions, Journal of Jilin Radio and TV University 93 (3), 2009, 91-93. *(translated from Mandarin)*

Kanet, J. J., Barut, M.: Problem-based Learning for Production and Operations Management. Decision Sciences Journal of Innovative Education 1 (1), 2003, 99-118.

Kanet, J. J., Stößlein, M.: Using a Supply Chain Game to Effect Problem-Based Learning in an Undergraduate Operations Management Program, Decision Sciences Journal of Innovative Education 6 (2) 2008, 287-295.

Stößlein M., Kanet, J.: Developing Undergraduate Student Research Experiences in Operations Management, Decision Sciences Journal of Innovative Education 6 (2), 2008, 495-502.

Stößlein, M.: Student Research Programs in Management Education in Greater China - An Overview (forthcoming in 2010).

Stößlein, M.: Developing Student Research Programs in Chinese Management Education (forthcoming in 2010).

Taiwan's Ministry of Education (Ed.): Education in Taiwan 2009. 2009, http://english.moe.gov.tw/ct.asp?xItem=11701&ctNode=814&mp=1.

University of Science and Technology, Teaching Affair Office (Ed.): National Undergraduate Innovative Experiment Plan. 2008, http://www.teach.ustc.edu.cn/inno_edu/cx2007hz.doc.

Zhang X.: Reform of Training Models in Business Administration, Journal of Ningbo University (Education Edition) 30 (5), 2008, 86-89. *(translated from Mandarin)*

Zhou, W.: An Investigation of Research-oriented Teaching for Undergraduates, Journal of Nanjing University of Posts and Telecommunications 10 (3), 2008, 64-68. *(translated from Mandarin)*

Students who complete a course in research methodologies often leave school with multiple skills. Knowledge of statistical analyses, statistical graphs, and research ethics can make students more marketable in many fields, while critical-thinking skills can aid in diverse areas of life. Because each university is unique, they often offer courses in research methodologies at different prices from their competitors. People who complete a research methodologies course can often choose from an extensive range of job titles, including market researcher and natural sciences manager. With the flexibility offered by this widely-applicable course, graduates may also become research scientists in one of a number of areas, including psychology, environmental science, or anthropology. In qualitative research, since methods are often more flexible and subjective, it's important to reflect on the approach you took and explain the choices you made. Discuss the criteria you used to select participants or sources, the context in which the research was conducted, and the role you played in collecting the data (e.g. were you an active participant or a passive observer?) Interviews or focus groups Describe where, when and how the interviews were conducted. A sample is a subset of individuals from a larger population. Sampling means selecting the group that you will actually collect data from in your research. For example, if you are researching the opinions of students in your university, you could survey a sample of 100 students. Supply chain management (SCM) courses are increasingly making their way into the nation's top business schools. To learn more about what these courses teach students and how they compare to one another, Software Advice ranked the top 15 universities at the undergraduate and graduate level. In order to give prospective students greater insight into the curriculums of what are commonly regarded as the top SCM programs in the U.S., we decided to analyze the strength, depth and variety of software- and IT-related courses in those programs. Software Advice's Top Universities for SCM Education. To determine which universities to examine, we aggregated the most recent rankings for SCM programs from a variety of sources (details can be found in the Methodology section). Figure 1. Landscape of current research on Chinese students studying abroad. These categories overlap in the research documentation, and from an overall perspective we would. agree on the discourse analysis by Ryan (2011), who has identified. Jürgen Henze & Jiani Zhu. bereft of significant and robust concepts that bring into view international student experiences. and identity reconstructions, thereby homogenizing and generalizing the negotiations of. international students when great dimensions of difference actually exist. (Gargano, 2009, p. 331). Chinese (International) Students Seen with Western Eyes: a paradox revisited. Ryan's (2011) periodization of university responses to the growing number of international.