Reshaping ICT Industry Projects – My Three-Year Experience

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Abstract

This paper documented my last three years experience as the ICT Industry Projects coordinator at School of Computer Science and Mathematics, Victoria University. My journey started in March 2003 when I was recruited by the School and appointed as the coordinator. Due to the complexity of the existing subject structure, the Industry Projects remained the most challenging subject in the school despite of many efforts and good wills. I have completely reshaped the two project subjects and transferred them to be one of the seven project models in "Learning in Workplace" at Victoria University. The breakthrough finally arrived after the launch of the University Learning in Workplace policy and Victorian Government pilot programs. The first engagement with our industry partner marked the new era for the Industry Projects. My discussion has shown that gender doesn't play any role in the success of their Industry Projects but the appreciation from female students towards male students is importance as it is often the key to solve the team conflicts.

Keywords

ICT, Industry Projects, management, curriculum, software engineering, IT education

1. INTRODUCTION

The importance of a substantial software engineering project undertaken by undergraduate students is widely recognized and documented (Liu & Stroulia 2003, and Fleming 2005). Although software engineering is one of the most rapidly growing fields in engineering and technology, the decrease of interest in students and decline in student's enrolment in IT has happened in most universities in the world (Tadayon 2004 and Coppit 2005). As software engineering educators, it is very important to attract and maintain the interest of students by exploring and identifying initiatives that excite and draw them to the discipline (Liu 2005 and Reichlmay 2006). Real Industry Projects and team work can have a great impact on student learning but providing these activities requires significant commitment from academics (Alzamil 2005 and Clark 2005).

The School of Computer Science and Mathematics requires all final year students in Bachelor degrees to undertake an industry project during the final year. Students are organised into teams which are organised by the School in consultation with an external or internal sponsors. The project is, as closely as possible, a 'real life' activity that students will typically face in their first year of work in the IT industry. Teams are required to visit the sponsors at least three times during the project and work in situ if required. They receive guidance and support from institution-based supervisors. Students are enrolled in one or two subjects for whom the project is the main learning activity. The team project is assessed against a written report, oral presentations and demonstrations with contributions from each member of the team.

The aim of the Industry Projects is to give students an opportunity:

- To work on a real software development project and
- To gain the industry experience
- To apply software engineering and database methodologies to design and implement a complete project
- To tackle issues developers face on a daily basis, e.g. liaison with clients, working in a team, documenting the project, developing a user manual, etc.
- To improve oral and written communication, and interpersonal skills

2. BACKGROUND

The Industry Projects have always been an important part of Computer Science courses in the School since the courses were established in 1992. In 2002, the Industry Projects were run in 2 Semesters under two subject codes, i.e. SCM3001 Project 1 and SCM3002 Project 2 and incorporated two English subjects, i.e. ACE3143

English Language and Communication 3 and ACE3144 English Language and Communication 4. SCM3001 and SCM3002 emphasised on technical aspects of software engineering life cycles while ACE3144 and ACE3144 were delivered by School of Language and Communication and focused on writing and oral communications skills, and employment skills.

The project students worked in teams of various sizes and gave two oral presentations during the Semester. In each presentation students would receive two marks; one for projects and one for communication. SCM3001 subject code was used in the 1st Semester while SCM3002 was used in the 2nd Semester . Students were allowed to enrol their Industry Projects in either the 1st Semester or the 2nd Semester. In order to distinguish the different stage of their projects, the students were called the "new" project students in their 1st Semester or the "continuing" project students in their 2nd Semester. ACE3143 was delivered to the "new" project students while ACE314 was offered to the "continuing" project students. If students started their enrolments in the 1st Semester, they would complete the four subjects in the order of SCM3001 and ACE3143 in the 1st Semester, and SCM3002 and ACE3144 in the 2nd Semester. If students chose to start their projects in the 2nd Semester, they would complete their projects in the sequence of SCM3002 and ACE3143 in the 2nd Semester and SCM3001 and ACE3144 in the 1st Semester of the following year. There were always 3 subject codes running simultaneously in one Semester, i.e. SCM3001 with ACE3143 and ACE3144 or SCM3002 with ACE3143 and ACE3144.

The major task for the project coordinator was to find projects and allocate supervisors for the project students. The students were then sent to their project supervisors once their projects were allocated. SCM3001/2 presentations were assessed by their own project supervisors. Due to the complexity of the subject structure, sometimes there was no suitable project available for students until the 6th week (12-14 weeks per Semester) so that some project teams couldn't finish their projects until the 1st week of the following Semester. The Industry Projects remained the most challenging issue to the previous project coordinators (a few quit the job), supervisors and English lecturers because of the availability of the projects, project sponsors, and project supervisors, in spite of much effort by and goodwill from many staff in the School.

3. YEAR 2003 – A CHALLENGING START

When I was recruited in January 2003 by the School, I was appointed as the computing project coordinator after resignation of the project coordinator. The newly appointed Head of the School sent a global email in February to ask the academic staff in the School to provide the projects and assistance to me to cope with the demanding project coordinator role. The Course Director and another female staff offered their time to supervise one project team each. Another female staff offered her advice about the history and relevant information about the subject. When I started my job in early March 2003, there were eight academic staff and four sessional staff available to be the project supervisors.

3.1 Understating the Situation

In order to get detail information about the subjects and the students, I talked to the English subject coordinator in February and met the English lecturers before even I started my job at the School. I learnt that the existing project students were in a complex situation where only students knew their project status. Some students were working on 1-Semester projects while others worked their projects half-way on 2-Semester projects; some worked alone while other worked in a team whose size varied from 2 to 5 students. In the 1st week of the semesters, I conducted quick interviews with all the project students. I discovered at least four different types of projects among the 109 project students in 34 teams as shown in Table 1(a). The situation continued into 2nd Semester with a similar composition among the "new" and "continuing" project students as shown in Table 1(b).

Table 1 Four Types of Industry Projects

(a) SCM3001 (1st Semester 2003)

No. of Students	Initial Enrolment	Project Length
19	2nd Semester 2002	2 Semesters
4	2nd Semester 2002	1 Semester
85	1st Semester 2003	2 Semesters
1	1st Semester 2003	1 Semester

(b) SCM3002 (2nd Semester 2003)

No. of Students	Initial Enrolment	Project Length
85	1st Semester 2003	2 Semesters

1	1st Semester 2003	1 Semester
13	2nd Semester 2003	2 Semesters
2	2nd Semester 2003	1 Semester

3.2 Immediate Actions

I set my priority on the following core issues:

- Allocate project and project supervisors in time
  Every "new" student belonged to a project team and every project team had a supervisor by the 2nd week of the Semester. In the meantime I assigned new supervisors immediately to the existing project teams if their supervisors were resigned or on long-service or extended sick leaves.
- Create new assessment rules
  I changed the way how the assessments were conducted: the project supervisors were only required to assess their own project teams. As there was no existing paperwork for the project assessments, four different oral presentation and demonstration assessment forms were designed to help supervisors to produce the consistent assessments. Three (3) supervisors were assigned for each oral presentation so that the teams would receive fair and reasonable assessments, and adequate feedback on their projects. For the 2-Semster project students, two oral presentations were required for the "new" students while two demonstrations were scheduled for the "continuing" students. For 1-Semester project students, one oral presentation and one demonstration were scheduled.
- Establish effective feedback mechanisms
  Five different checklist forms were also designed for the project teams to understand the subject requirements. A new subject website was setup to host the subject materials, and to post the latest information about the subjects.
- Establish effective communication with supervisors and students
  In the 2nd Semester, the initial checklist form was designed for the "new" students and week 1 checklist was designed for the "continuing" students as shown in Appendix 1 for the coordinator to track the team communications with their sponsors and supervisors, and to monitor the team progresses.

3.3 Major Concerns

The mixed class was one of the two major problems. Although the project students enrolled in SCM3001 in the 1st Semester and SCM3002 in the 2nd Semester, they enrolled in either ACE3143 or ACE3144 subject depending on their first enrolment. One typical case was that one English lecturer had 17 "continuing" students and 13 "new" students and she had to deliver different subject contents to the mixed class in her class. The "new" students found it very hard to know if the lecturer actually talked to them or the "continuing" students. The worst hit was the "new" student who enrolled in 1-Semester project. The students and lecturers and supervisors were very confused with the requirements and assessments.

The other major problem was the subject results. A very high percentage of the project students received HDs as shown in Table 2. It was due to 65% documentation marks came directly from the project supervisors and only 20% oral presentations or demonstrations were assessed rigorously by three assessors.

Table 2 2003 Student Results

Grade	SCM3001	SCM3002
HD (80-100)	65%	54%
D (70-79)	24%	33%
C (60-69)	10%	10%
P (50-59)	1%	3%
N1/N2 (< 50)	-	-

3.4 Getting Results

During the very first year, I produced and revised more than 60 documents which included forms, checklists, subject web pages, templates and sample documents to help the supervisors and students to keep track of their projects. By the end of the 2nd Semester, almost all the teams completed their projects within the timeframe and all the student received their project marks at the same time as their other subjects.

There were also two procedures established:

- Exemption based on IT professional industry experience

  Students are allowed to apply for 1-Semester project (SCM3001/2) exemption based on their professional industry experience. First, students need to write a letter to state why they deserve the exemption before their case will be considered. Once the case is accepted, students need to get a reference letter from their companies regarding their current roles and responsibilities, and then they give a presentation based on their industry experience (the entire Software Engineering life cycle as well as their team work experience) to an exemption panel organized by the project coordinator. The English lecturers will be invited to be a part of the panel and assess the presentation.

- Oral presentation and demonstration results

  The supervisors must give the assessment marks at the end of each presentation and submit to the subject coordinator on the day. After the supervisors' review, the oral presentations and demonstrations results will be released to the students in the next week. The general feedback will be given to the students during SCM3001/2 class and specific feedback will be given to the individual teams via their supervisors or the project coordinator.

I initiated development of ACE3143 website (http://www.staff.vu.edu.au/language%20and%20communication/) which was successfully implemented by one of the project teams in 2003 for English lecturers. It is now used by the English lecturers not only for the computer science students but also for the students in other courses across the whole University.

4. YEAR 2004 – BECOMING A WORK-BASED MODEL

In 2004 the school put in more resources for the Industry Projects. A dedicated project lab was established and a Microsoft Windows server computer was allocated for the project students. The project students were encouraged by the coordinator to bring their own project sponsors, propose their projects and form their own teams. A student survey form was designed to collect the information about team member skills which included design, programming, documentation and communication skills. In order to successful complete the projects, it was important that each team had variety of skills. WebCT was introduced and used as online subject website for SCM3001 and SCM3002.

4.1 Strategic Changes

After working tirelessly with the supervisors and English lecturers, I made strategic changes to the Industry Projects in consultation with the project supervisors:

- Major subject structure change
  - discontinuity of 1-Semester project
  - reinforced the team-based approach in the Industry Projects
- Introduction of 20% of marks for Innovation and New Features for the "new" students and 20% for a User Acceptance Test for the "continuing" students and reduction of documentation marks from 65% to 45%
- Introduction of Final and End-of-Semester Checklist as shown in Appendix 2
  - No Checklist No results
- Provision of full set of document templates including problem statement, SRS (Software Requirements Specification), SDD (Software Design Document), Test Plan and DPR (Design Project Report), user manual and e-poster at both websites as shown in Appendix 3.
- Remove of irresponsible supervisors

4.2 Quality Control

In order to provide better quality control and uniform approach for assessments, the following arrangements were introduce for assessment:

- Centralized marking at the supervisors' meeting for the following components
  - 20% Innovation and New features for the "new" students
  - 20% User Acceptance Test fro the "continuing" students
- Individual marking scheme for team work using the following input as a measurement
  - Supervisors
  - Self evaluation and peer assessments

The following strategies were also introduced:

- Centralized marking at the supervisors' meeting for the following components
  - 20% Innovation and New Features for the "new" students
  - 20% User Acceptance Test fro the "continuing" students
- Provision of a full set of document templates and sample documents

As the result of the quality control strategies, 2004 and 2005 results were standardized and inline with other as shown in Table 3 and 4. The SET (Student Evaluation of Teaching) and SES (Student Evaluation of Subject) have received better responses from the project students as shown in Appendix 4.

Table 3 2004 Student Results

Grade	SCM3001	SCM3002
HD (>80)	36%	17%
D (70-79)	56%	54%
C (60-69)	8%	18%
P (50-59)	-	11%
N1/N2 (< 50)	-	-

Table 4 2005 Student Results

Grade	SCM3001	SCM3002
HD (>80)	7%	20%
D (70-79)	49%	37%
C (60-69)	31%	31%
P (50-59)	10%	12%
N1/N2 (< 50)	2%	-

4.2 Recognition

My successful and effective management of the Industry Projects was quickly identified and recognized by the University. It formally became a case study (http://tls.vu.edu.au/SCS/LiW/wplace_project.htm) of good practice among one of the seven established models in the University's new initiative "Learning in the Workplace" (LiW) in December 2004. It was presented as a part of PVC's keynote speech at Learning Matters 2004, a Victoria University annual teaching conference and later presented in one of the workshops in Learning in the Workplace: the teaching perspective. The emphasis on real world Industry Projects resulted in a major shift from only 20% externally sponsored projects in 2003 to 80% at the end of 2004. More and more external sponsors were willing to provide their projects because of efficient management of the subject and the consistent subject guidelines and timelines.

5. YEAR 2005 – MOVING TOWARDS INDUSTRY-BASED LEARNING

Victoria University introduced Core Graduate Attributes (CGAs) policy (TLS, 2005a) in order to make a significant difference to the experience of our graduates both in finding employment and in becoming lifelong learners. The Industry Projects provided an excellent opportunity to fulfil all these requirements (TLS, 2005a):

- An effective problem solver in a range of settings, including professional practice
- can locate, evaluate, manage and use information effectively (including "critical thinking", ICT and statistical skills)
- communicates effectively as a professional and as a citizen
- can work both autonomously and collaboratively as a professional
- can work effectively in settings of social and cultural diversity

Certainly it is challenging for me as the coordinator to look at beyond the curriculum and bring in some key components such as employability skills and IT industry professional practice.

5.1 Employability Skills

Since 2003, I have gradually introduced career education to the industry project subjects. Each Semester, the past graduates and career educators at Student Career Services (SCS) were invited to give talks or presentations to the project students about career development. Students have benefited from the exposure to real world job markets and now have a better understanding of the current ICT industry skill requirements and demands. These presentations covered broad issues from job interview skills, legal issues in IT industry, to soft skills such as "What employers want?" As a result more students have sought professional support at SCS for their future career planning and development during their project year and some even after their graduation ceremonies. Several students have found their IT jobs through the "Career Builder" program. They have come back to talk about their experience with SCS and they presented their cases not only in my classes but also to a University forum. In the meantime, they also brought back their experience in the IT industry and provided lots of suggestions on real world projects and external assessment.

5.2 External Assessments

Although initial success with the Industry Projects was achieved in 2004, I started a new strategic plan for improving the learning outcomes. At the beginning of 1st Semester 2005, I started to contact IT companies in the hope to establish a framework for developing a workplace model for the subjects. Although the work-based project model was working well with the current courses, it lacked the external industry's direct input and contributions to the process as the external sponsors were acting like a client who only provided the project requirements. All the projects were supervised by the academic staff and all the assessments were carried out by the academic staff. In order to achieve better learning in the workplace, it was very important to involve the external sponsors in the project supervision and assessments. My immediate action was to invite the external sponsors to the final presentations and to participate in the user acceptance tests. All the project teams were encouraged to get references from their sponsors, which would take into consideration of their final marks. This initiated the dialogs between the university and the IT industry. My proposal for a new workplace model was well received and successfully gained the University Learning in the Workplace grants.

5.3 Breakthrough

In March 2005, I was selected and interviewed for the "Mapping the Industry Based Learning (IBL) Environment" project conducted by Multimedia Victoria (Department of Infrastructure, Victorian Government) about IBL programs for IT students at Victoria University. I indicated my strong commitment to establishing the connection with local industry partners. In July I was invited to attend a special meeting to launch the Industry and Universities Collaboration Pilot Program and ICT Industry Skills Scholarships Pilot Program.

The pilot grant was awarded on a dollar-for-dollar basis. After the appointment of the new Executive Dean for Faculty of Health, Engineering and Science Prof Ian Rouse in August 2005, I took the opportunity in his very first staff informal meeting and mentioned the pilot grants from the Victorian Government. He showed great interest, read through our draft application and made his 50% cash contributions immediately and later another 50% was matched by the Head of the School. In September 2005, I, together with our colleague, successfully gained the Industry and Universities Collaboration Pilot Program grant in October 2005

The grant is targeted at the enhancement of final-year Computer Science Industry Projects by strengthening the linkages between participating students and industry partners. These funds help establish a pilot program aimed at the recruitment of recent past graduates of the School to act as industry advisers. These graduates are able to offer their insights and new workplace perspectives whilst engaged in the assessment of the software systems created by the current cohort of students.

On 11 October 2005, the Director of SCS launched the University Learning in the Workplace policy (TLS, 2005b) at Western Bulldogs Whitten Oval, which provided me the opportunity to engage and network with key people from industry, the professions and the community. In November, our first engagement between Flexible Drive Agencies Pty Ltd was formally established after our joint proposal for ICT Industry Skills Scholarships Pilot Program grant was awarded. After 3 years endless efforts from scratch the breakthrough finally arrived, which marked the beginning of new era for the Industry Projects and made it fast moving towards Industry-Based Learning.

6. DISCUSSIONS

6.1 Experience with the students' teamwork and gender difference

Over last there years, I have had an opportunity to observe the teamwork of our project students. For many students, the teamwork was always the challenging part of the Industry Projects although they had some

experience with teamwork in the 1st or 2nd year assignments. In Industry Projects, quite often the capable students had to carry extra weight to cover the weak students. When the weak students didn't show their appreciation towards the capable students, the teamwork became nightmare for everyone. In the very extreme cases, the teams broke down and were split into two. As a result, in 2003, there was one team of 5 students, i.e. 3 male and 2 female students by a male team leader in the 1st Semester and split into two teams in the 2nd Semester: one team consists of 2 male and 1 female students and the other of 1 male and 1 female students. Eventually the two new teams completed the same projects with two different solutions for their client but the team conflict remained as a scar.

In 2004, the individual marking scheme was introduced to recognize different contributions from each team member, which kept the teams stable for the whole year. In 2004, a different kind of teamwork problem came to surface. In the 2nd Semester, the two male students from two different project teams lead by two female leaders were suddenly stopped working for the team projects while the male students were key programmers for their projects. One team leader found out her team member were very stressful during the last Semester as he was constantly worried that he might let the team down and also his other subjects. So she spent her time with him in the project lab and started to learn the new program language along with him. Her encouragement and commitment finally made him regain the confidence and the team completed the project with a high standard. The other team leader used different approach and reported that her male team member lacked of commitment to the project and criticized the male team member didn't do the assigned team work. The project supervisor and I made lots of efforts to help the team to resolve the difference but the male student refused to listen to the leader and make no effort toward the team project. Although the team got a pass for their team project in the end, it provided a very hard lesson to learn.

From my experience gained in 2003 and 2004, I started to teach the project students about the team dynamics in my class in the hope that they would recognize the diversity and culture difference among their team mates. Thing went very well until a female leader reported that her two male students never contributed any quality material to the team work. She was so stressful and broken into tears several times in my office although each time she became relaxed after she left my office. She aimed very high and couldn't tolerate the other two students' contributions in her team documentation. At one extreme time, her supervisor and I rushed to the office of Director, Student Career Service to seek professional help on the matter as she seemed to be nerve breakdown. We made an emergency arrangement for the student with the Manager, Student Counselling Service at Victoria University. Due to confidentiality, I didn't know the result of the counselling but the team completed their project and got satisfactory results. As a result, 4 hours compulsory teamwork training was conducted by the SCS in the 1st Semester 2006. The new project students learnt the Basic Teamwork Skills such as developing an atmosphere of trust among team members and running effective team meetings, and Advanced Teamwork Skills such as resolving team conflicts and dealing with difficult people.

Although the team conflicts were all involved with the female students, I would still think they were either coincidence or because of my approachable nature. Showing appreciation from female students towards male students plays very importance role in the Industry Projects. It is often the key to solve the team conflicts. The good news is that my project students are now benefiting from the professional training.

6.2 Experience with industry partners

It was a steep learning curve for me as an academic to establish partnerships with local industries. In October 2005, I obtained the list of companies from SCS and sent an individual email to 25 companies. Only one company responded with "yes for further discussion", 4 companies said "no" and the rest were silent. That's how we got connected with Flexible Drive Agencies Pty Ltd. My colleague and I visited the company to discuss their IT requirements. We had a very fruitful meeting and identified two feasible projects for our project students. The initial success has given me encouragement and confidence to seek more industry partners. From my professional connections, I had Australian Unity agreed to submit a joint application for the scholarships. We managed to get our joint application approved very quickly by Multimedia Victoria in November 2005.

It took me 8 months from the initial emails to the scholarship payment. There is no doubt that it has been a very time consuming process with not a high success rate. Nonetheless, the hard-won initial success gave me strong encouragement and full confidence in my persistence in and commitment to engaging more industry partners and obtaining more scholarships for our students. I fully understand the benefit that the engagement can bring to the industry partners and the importance to our students' future careers, which is the driving force for my engagement activities beyond 2005. I believe in what Thomas Fuller said "All things are difficult before they are easy."

7. CONCLSUIONS AND FUTURE WORK

This paper summarised my last three years journey as the ITC industry project coordinator at School of Computer Science and Mathematics, Victoria University. Over the 3 years, I have received support from the Dean, the Head of the School, the Course Director, and the staff from Student Career Services, the academic supervisors, the English lecturers, and past graduates. My successful management of the Industry Projects was recognized by the University and the Industry Projects became a case study of Project models, one of the seven established models in Learning in Workplace. Launch of the Learning in Workplace policy at the University and the Industry and Universities Collaboration Pilot Program and ICT Industry Skills Scholarships Pilot Program from Multimedia Victoria brought the fundamental breakthrough in the subjects. The first engagement with Flexible Drive Agencies Pty Ltd marked the new era for the Industry Projects.

With the help of newly established Office for Industry and Community Engagement, 8 industry partners have been recruited by July 2006 and total 24 ICT placement scholarships are available: 12 placements are offered in 2006 and 12 placements will be offered in 2007. During the placements, the students will be supervised by our industry partners at their premises. Further more, the Centre for Work Integrated Learning begins to include the Computer Science students their Co-operative Education program, which offers the students one year of paid, full-time employment with an organisation between their 2nd and 3rd year studies at Victoria University. It is expected that the first group of Computer Science students will take such opportunity in 2007.

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APPENDIX 1

SCM3002 Project 2 -Initial Contact Checklist

The following tasks must be completed by **Wed 20 August 2003.** The original signed sheet should be handed in **Dr. Hao Shi's locker** by **10:00AM on Wed 20 August 2003**. The team should keep a photocopy of the original **signed** sheet.

Team No: _____ **Supervisor:** _____

Project Title: _____

Team Leader: _____ **Student ID:** _____

Contact Detail: _____

Event	Signature and Date
Meeting with Dr. Hao Shi, the subject coordinator • Obtain the confirmation of your project, supervisor and sponsor • Obtain the School "Industry Project" document • Obtain the login and password for the School Web Server	Team Leader Signature: Date:
Designing one web page for SCM3002 Project 2 in the format of http://140.159.223.211/3002nXX/SCM3002/default.htm • Team Number • Project Title • Team members (name only) • Supervisor contact detail • Sponsor contact detail • Subject Coordinator contact detail • Photo/s with sponsor and supervisor ** • Presentation timetable*** • Online log book - date and time of the group meeting and weekly meeting with supervisor ***	Team Members' ID and Signatures: Date:
Meeting with your supervisor • Make an appointment with your supervisor • Bring your project allocation to your supervisor • Inform your first presentation date and time • Discuss the project detail with your supervisor • Schedule the weekly meeting • Take photo* with your supervisor • Inform your SCM3002 project web page URL	Supervisor Signature: Date:
Meeting with your sponsor • Make an appointment with your sponsor and visit your sponsor • Highlight the important points in the "Industry Project" document and submit the copy to your sponsor • Confirm the project title and contents • Schedule the next meeting if necessary • Take photo* with your sponsor • Inform your SCM3002 project web page URL • Sponsor business cards for the team, supervisor & Dr. Hao Shi	Sponsor Name: Sponsor Signature: Date:
SCM3002 – Briefing Meetings in D662 at 2:00PM • Week 6: **Wednesday** 10 September 2003 • Week 9: **Wednesday** 8 October 2003 • Week 12: **Wednesday** 29 October 2003 **Please check the subject web site regularly for any changes (http://www.staff.vu.edu.au/haoshi/SCM3002).**	Team Members' Signatures: Date:

*You can borrow the digital camera from the University Library. If you need any help, please contact Dr. Hao Shi at D623.
**If the sponsor and supervisor is the same person, then only one photo is required on your web site.
***Dr. Hao Shi will check the content regularly and you must make sure the contents always up-to-date.

Team No.:	Project Title:		
Day: Wed 6 August 2003	**ACE3144:**	**Supervisor:**	

Team (Please check the student Names and IDs carefully)

S*	ID	Surname	Given Names	Team Leader	Signature/s

Is there any change to the Team?

If no, _____ **(signature from Team Leader)**
If yes, please explain the reasons:

Team Website URL: http://140.159.223.211/3001u01/SCM3002/default.htm
Please create a new directory **SCM3002** for 2nd Semester 2003 record by Monday 25 August 2003.

Once it is done, _____ **(signature from Team Leader)**

Complexity of the Project (This form must be submitted to Dr. Hao Shi by Mon 25 August 2003)
Please make sure that you discuss this session with your supervisor and determine the level of the complexity the team wish to achieve. You must inform your project coordinator and supervisor any change to your project during the 2nd Semester as the complexity of the project will have a bearing on the final assessment of SCM3002.

Semester	Programming Language/s	Database/s	Others (Tools, or Techniques)	End Product Type (stand alone, windows application, web site, etc)	Complexity Level of the Project (P, C, D, HD)	Signatures (Team Leader and Supervisor)
Documented in 1st Semester						Team Leader Supervisor
Planned in 2nd Semester						Team Leader Supervisor
Any changes?						Team Leader Supervisor

SCM3002 S2 2003 Week 1 Checklist

APPENDIX 2

SCM3002 Project 2 – End of Semester Check List

Each team must submit this form with **the photocopy of the sponsor signed SRS page** to Dr. Hao Shi by **SWOT VAC**. Penalty will be applied to the late submission.

Team No: _____ **Supervisor:** _____

Project Title: _____

Team Leader: _____ **Student ID:** _____

Contact Detail: _____

	Check List	Signature and Date
Sponsor	**I have** • received the "Industry Project" document from the School of Computer Science and Mathematics • **also** received and signed SRS	Sponsor Name and Signature: Date:
Supervisor	**I have received the following documents from the team during the Semester:** • Problem Statement • Final SRS (with Sponsor Signature) • Final SDD **Did the team meet you regularly?** Please circle: **Yes** or **No**.	Name and Signature: Date:
Team	The Team understands that **NO** results will be released without the completion of the form. Below is the individual contribution to the project during the Semester: **Team Member (ID & Name)** / **Contribution (%)**	Team Members' ID and Signatures: Date:
Subject Coordinator	I have received the photocopy of the sponsor **signed SRS page** and the team fulfil all the above requirements. Please circle: **Yes** or **No**.	Signature: Date:

Each team will be given a photocopy of this form the subject coordinator.

SCM3001/2 Project 1/2 – Final Check List

Each team must submit this form with **the photocopy of the sponsor signed SRS page** to Dr. Hao Shi by **SWOTC VAC**. Penalty will be applied to the late submission.

Team No: _____ **Supervisor:** _____

Project Title: _____

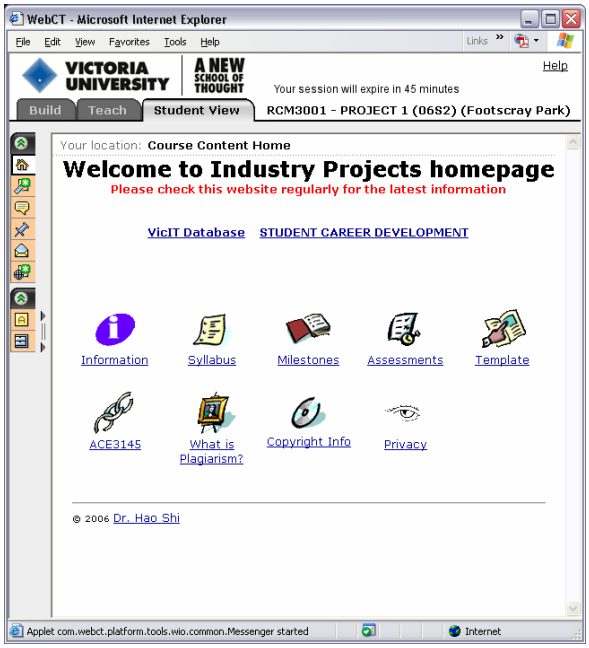
Team Leader: _____ **Student ID:** _____

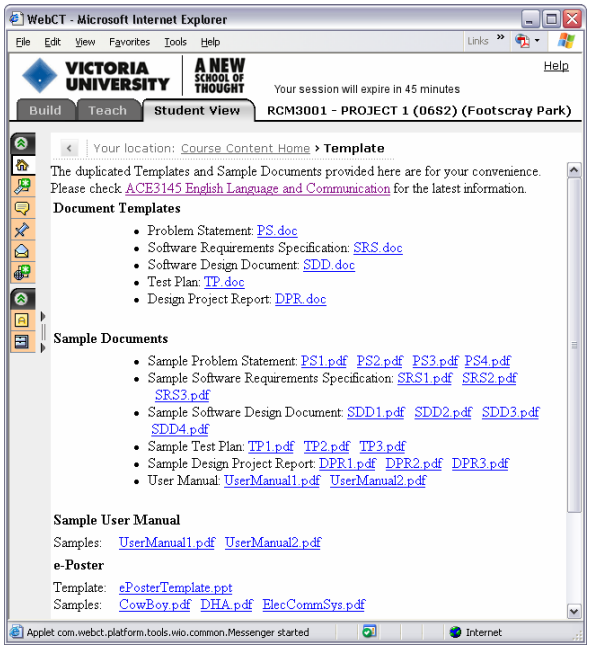
Contact Detail: _____

	Check List	Signature and Date
Sponsor	**I have** • **received** the School "Industry Project" document from the School of Computer Science and Mathematics • **received and signed** SRS, and • **tested** the software The software is _____ working. (**a**) fully (**b**) partially (**c**) not →	Sponsor Name and Signature: Date: Please circle: (**a**) or (**b**) or (**c**)
Supervisor	**I have received the following documents from the team:** • Problem Statement • Final SRS (with the Sponsor Signature) • Final SDD • Test Plan Document • Final Hardcopy of DPR **Did the team meet you regularly?** →	Name and Signature: Date: Please circle: **Yes** or **No**.
Team	The Team understands that **NO** results will be released without the completion of the form. Below is the individual contribution to the project during the Semester: **Team Member (ID & Name)** / **Contribution (%)**	Team Members' ID and Signatures: Date:
Subject Coordinator	I have received the photocopy of the sponsor **signed SRS page** and a project **CR-ROM**, which contains the following items: • Deliverables • Documentation • Presentation materials **Does the team fulfil all the above requirements?**	Signature: Date: Please circle: **Yes** or **No**.

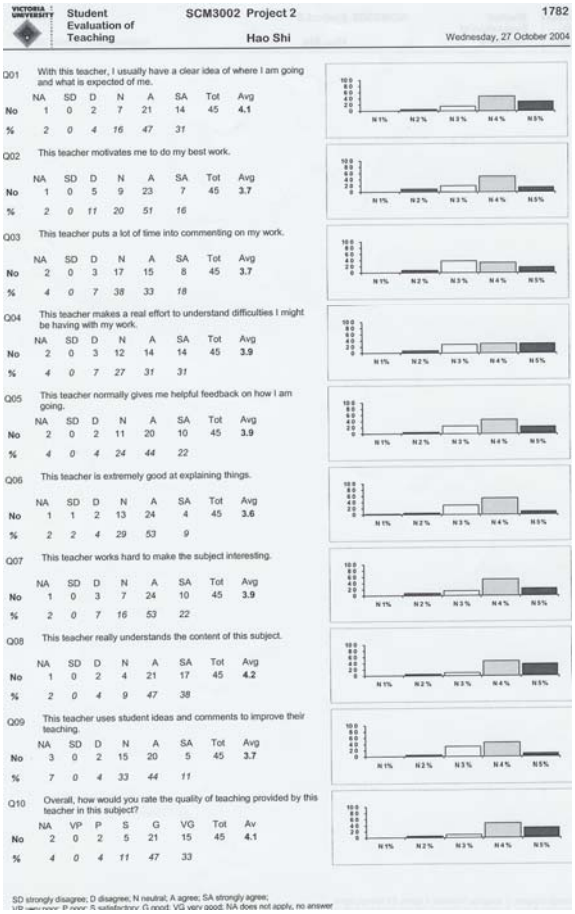
Each team will be given a photocopy of this form by the subject coordinator.

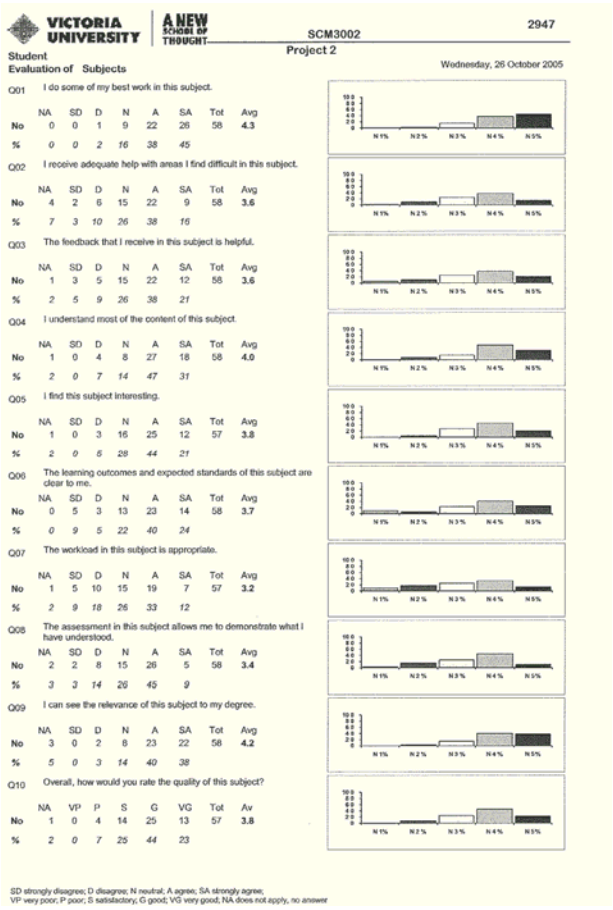
APPENDIX 3*





APPENDIX 4





* "RCM" subject prefix replaced "SCM" from 2006. Only the latest (2006 onwards) subject's contents can be shown because WebCT Campus Edition 6 replaced Campus Edition 4 and as result, 2003-2005 subject contents couldn't be retrieved from the University server.

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