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IFFTI FACULTY EXCHANGE/INTERACTION INITIATIVE 2015-16: REPORT

At School of Fashion and Textiles, RMIT University, Brunswick, Melbourne, Victoria, Australia

Period: 4th July to 15th July 2016

Exchange Faculty: Dr. D. Samuel Wesley, Associate Professor, Department of Fashion Technology, NIFT, Chennai, India

Coordinator: Prof. Tina Guglielmino, Deputy Head Vocational Education & Training, School of Fashion & Textiles, RMIT

Submitted to: Commodore Shree. Vijay Chaturvedi (Retd.), Secretary General, IFFTI

Program Schedule

Date	Place	Activity	Facilitator(s)
4th Jul 2016, Monday	School of Fashion & Textiles, RMIT	Observing all the facilities/infrastructure	campus induction by Tina Guglielmino
5th Jul 2016, Tuesday	Associate Degree Fashion Design & Technology - Capstone introduction	Observation/Interaction	Mandy Penton & Sarah Charles
6th Jul 2016, Wednesday	Associate Degree Fashion Design & Technology - Capstone introduction	Observation/Interaction	Sarah Charles, Industry Interaction for Capstone
	Library	Discussion on library systems & functioning	Michelle Matheson, Liason Librarian
7th Jul 2016, Thursday	Auditorium	Speech by Founder of PA	Peter Alexander
	Associate Degree Fashion Design & Technology - Capstone introduction	Observation/Interaction	Sarah Charles
	Centre for Advanced Materials and Performance Textiles (CAMPT)	Observation/Interaction on Research facilities and ongoing research activities	Prof Rajiv Padhye & Dr. Rajkishore Nayak
8th Jul 2016, Friday	Introduction to Bachelor of Textile Design Program	Observation/Interaction, discussion for student interaction, About BATD Blog	Claire Beale, Lecturer BA Textile Design & Dr. Jenny Underwood
	Textile Testing Services at RMIT	Observation/Interaction	Trudie Orchard, Manager Textile Testing

Date	Place	Activity	Facilitator(s)
9th Jul 2016, Saturday			
10th Jul 2016, Sun			
11th Jul 2016, Monday	Associate Degree Fashion Design & Merchandising	Observation/Interaction	Dr. Tarun Panwar, Lecturer (Fashion Management)
	Centre for Advanced Materials and Performance Textiles (CAMPT)	Observation/Interaction on Research facilities and ongoing research activities	Dr. Rajkishore Nayak
12th Jul 2016, Tuesday	Office of Head of School of Fashion and Textiles	Interaction on School of Fashion and Textiles curriculum and International linkages	Prof Robyn Healy Head of School
	RMIT City Campus	Observing all the facilities/infrastructure	Dr. Rajkishore Nayak
13th Jul 2016, Wednesday	Introduction to Bachelor of Design program and teaching pedagogy	Observation/Interaction	Jo Cramer, Program Manager, Bachelor of Fashion (Design)(Hons)
	TBIS-APCC 2016 – 9th Bioengineering and Informatics Symposium (TIBIS) & 6th Asian Protective Clothing Conference (APCC) - RMIT	Participation/Interaction	Prof Rajiv Padhye
14th Jul 2016, Thursday	"Cotton on" Industry Visit	Visit facilities / Interaction with Industry personal	Natasha Kilgour
	Associate Degree Fashion Design & Technology	Discussion on student collaboration on the Production Planning subject	Mr. Nishan Heenpella
15th Jul 2016, Friday	TBIS-APCC 2016 Conference - Visit to Institute For Frontier Materials, Deakin University, Geelong Waurn Ponds campus, Victoria	Visit/Interaction/Research Presentations	Prof Xungai Wang, Director, IFM, Deakin University
16th Jul 2016, Sat			

"Learning is an experience everything else is just information" ***Albert Einstein***

Prelude:

The IFFTI Faculty Exchange Initiative is one of the best activities of IFFTI which gives the Fashion Educator to get a panorama view on world class teaching/research/training experience otherwise not available in the same country where he/she lives. RMIT belongs to the top 10 in the 2015 Business of Fashion's (BoF) Global Fashion School Rankings and it is a great opportunity for me to be there and to interact with the world class but very simple & obliging fashion academics. Nevertheless this would not be a reality without the generous funding of IFFTI.

RMIT Experience:

A lot of things can be learned from the different facets of RMIT *the people-the facility-the system-their performance*. I teach in The Department of Fashion Technology in NIFT Chennai, closer to this program in RMIT is the Associate Degree of two years duration in Fashion Design & Technology, and I was associated with this program most during my visit and gained a lot which I can try emulate over back here. I sat through their Capstone introduction program. The first quality to notice is their punctuality, both faculty and students. They keep punctuality in both start of any class/lecture and the end. The class rooms are closed at the beginning and can only be opened from inside afterwards, so all are present at the beginning itself. Every room is secured, mostly automatic, can be opened only by the authorized persons either with key or their smart card. This saves lot of man power to secure also it does auto registering of the user of the facility/lab. The faculties here are very much approachable and available for the students, they can just knock and enter and meet them. The faculty and students are well connected seamlessly that any change of timing or venues are immediately known to every one through campus network through mobiles. Their class rooms are furnished to facilitate easy interaction as groups among students, tables and chairs around (Figure 1). This is radically different from traditional class rooms of monotonous lecturing with no or very limited interaction/discussion.

Figure 1: Interactive class room setup

Even the conference rooms are fitted with rotating chairs (Figure 2) so that the participant groups can face each other and have discussion on the topics thrown by the expert.

Figure 2: Rotating chairs at conference hall

Nevertheless all the class rooms and practical labs are Audio/Video facility enabled with big screen LED TVs or projectors. The facilities in the class rooms are more ergonomic for the deliverer as well as the recipients. There more than one projector fitted in the bigger class rooms (Figure 3) also the projectors are fitted facing different directions for easy view.

Figure 3: Two Overhead projectors in a class room

At the door of every class room/Lab the Room Time table is fixed (Figure 4) so that anyone can understand what class is going on and who the faculty is.

Figure 4: Room Time table fixed on the class room door

The faculties are having high interaction which is interlaced in their system. Most of the faculties share the room and sit open and close to each other, so that they can communicate with each other better. Also they make it a point to meet every one almost three times a day, two tea breaks and a lunch break at the faculty common room. All of them prefer to take lunch in the common room and not in their respective rooms, so there are no Islands built around them but become more open and have more opportunity for easy exchange of their ideas/knowledge.

Another important policy RMIT follow is getting away with attenders/lab assistants. Every single job is done by the faculty themselves and they themselves get trained when the need arises to operate any instruments in the labs. This helps to reduce a lot of overheads and make every one responsible for their work. Photo copying/printing facilities (Figure 5 Left) for faculty is free, but no operators for that. Every one need to give print command in their system and go to the nearest printing machine and swipe their smartcard to print their document. Students can use the same facility by paying by swiping their card, and they can top up the credit in their smart cards through online or conveniently in the kiosks (Figure 5 Right) provided.

Figure 5: Copier/Printer (Left); Top up kiosk (Right)

For pattern tracing, the illuminated tables (Figure 6) are provided for easy and ergonomic way of working. This helps precise tracing/cutting apart from the advantage of causing less strain to the eyes.

Figure 6: Illuminated tracing table

To develop sample garments miniature dress forms of $1/4^{th}$ or $1/5^{th}$ size (Figure 7) are used especially in case of developing fully fashioned knitted garment designing.

Figure 7: Miniature dress forms

As part of the Associate Degree Fashion Design & Technology program, students carryout Design and Development of Capstone Profile outfit in their second year of study. In this they culminate all their knowledge/skills acquired during the previous semesters study. In Capstone they also learn how to work as a team consisting of classmates not necessarily their friends or members of their choice. This experience helps them to learn how to work in the real industrial atmosphere full of people not of our choice. Generally we used to ask the students to form the group and mostly they choose only their friends. This is an eye opener that randomly choosing the members. Also they do the ice breaking sessions and mentally prepare the students to adjust/cope up with the non-cooperating/over enthusiastic fellow mates. To understand the

industry interaction process, the experts from “Cotton on” group were invited to interact with the students. This concept is good and will clear all the ambiguity what student may face during their visit/interaction with the industry/brands. Faculties interact with the students using the online communication link https://todaysmeet.com/capstone, to clear all the doubts and give required instructions of a special (temporary) program.

An industry visit was organized to “Cotton on” group (Figure 8) at Geelong to understand the practices of buying/brand office. It was a rare opportunity to visit the buyer headquarters in Australia. There are 20000 people working in the group and having 8 brands, 1310 stores at 17 countries for “Cotton on” group and sourcing from 400 suppliers located in Asia/Africa including 12 suppliers from India. All the 8 Brand buying offices are located in close vicinity and every buying office of thousands of square feet area employs 1500 of coordinators, designers, marketing personals etc. They are equipped with design studios, modeling rooms, sample display, store models etc. The work place is more employee friendly having coffee shops, gym, indoor games etc. Every merchandisers/designers work in the open hall sitting beside each other, which helps easy personal contact and visibility also saves lot of time. It was surprising to know that there is not even one sample sewing machine available because every single sample is stitched only at the supplier’s facility.

Figure 8: “Cotton on” Group factory visit at Geelong

“Cotton on” practices ethical buying policy including use of organic cotton, banning sand blasting practice, fire and safety accord etc. They are also in to CSR activities at Uganda. The visit was a great experience helped to understand how things happen at the other end of the fashion business.

One of the best practices observed is use of customized version of “Blackboard” learning management system throughout the campus. It helps easy and better communication between the student and the subject faculty. The subject faculty announces the assignments, declare results, load study materials, videos of practical subjects like garment construction etc. which

the student who has registered for that particular course can access. It has the provision for the students to communicate with the faculty and submit assignments online. All the assignments are checked for similarity using “turnitin” before being evaluated.

The garment construction labs are equipped with camera fitted machines which helps all the students to get view of demo sewing process by projecting the video on the screen. In the Garment construction and Pattern Making labs discussion tables and chairs are provided to discuss the work to be done and clear the doubts. Pattern making tables are provided with the wheels for easy rearrangement of the table position.

Students are having Union named as RMIT University Students Union (RUSU) and they are organizing several useful awareness, sports and recreational programs. There is a RUSU office (Figure 9) located in the university having all the details of curricular and co-curricular activities.

Figure 9: Student Union office

Students also have a study space (Figure 10) with furniture, white boards and plug points for laptop. It is a nice calm space for students to study in private without disturbance.

Figure 10: Student Study Room

As a rare opportunity I could attend a speech organized at RMIT by Mr. Peter Alexander, Founder of brand PA, speaking on the development of his brand from the scratch to the multinational one.

Library:

The library is one of the state of the art facilities in RMIT which operates on the popular “Ex Libris Alma” library management system. The advantage of this system is that it interlinks all libraries located in all different campuses including overseas. All the libraries are open to all the member of each campus. Through this facility all the E-contents including videos of all libraries can be accessed through online. They have the highest number of books and journals both online and in print in the field of fashion and textiles. There is a user friendly Library search screen (Figure 11) located at the entrance for the visitors.

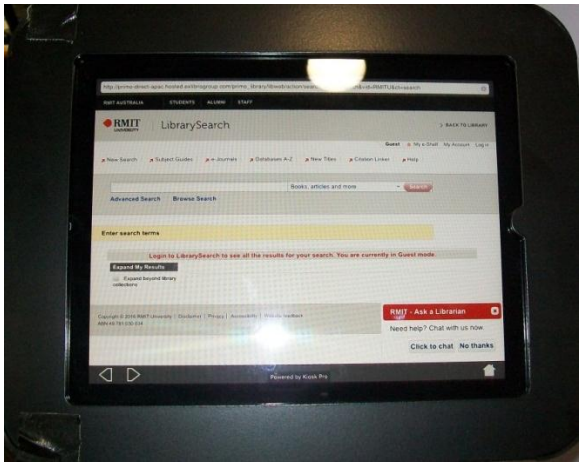

Figure 11: Library search screen

When a book is searched and identified, the software shows the layout of the library and indicates (Figure 12) the correct supposed to be location of the book in the rack.

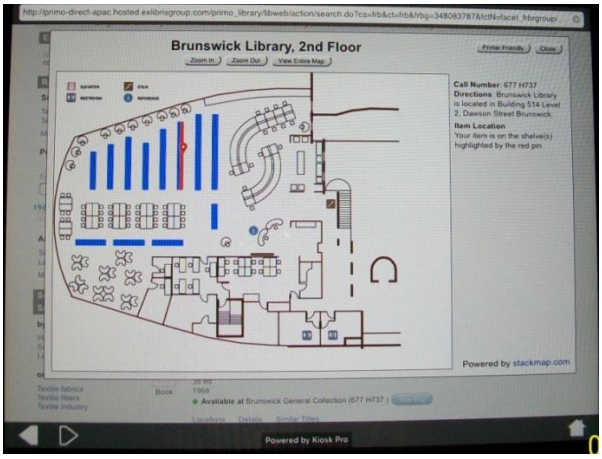

Figure 12: Book location indicator

Library has “self-check” system which facilitates self-issue of book without any library staff assistance. This eliminates manpower requirement and helps hazel free experience for the user.

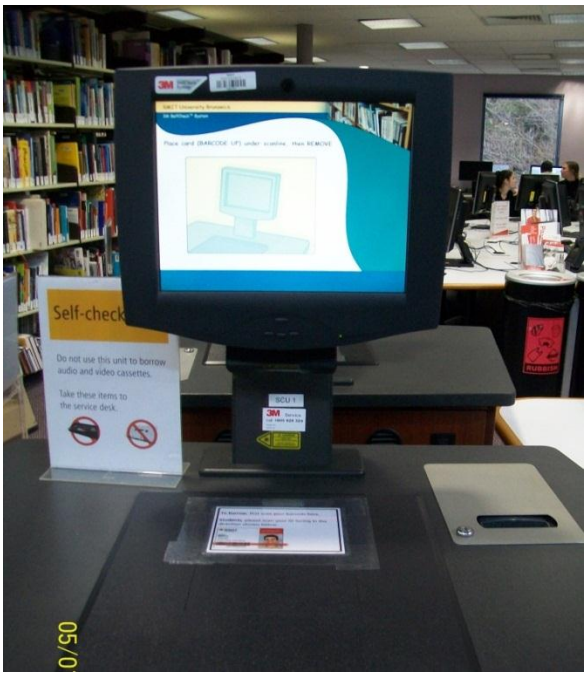

Figure 13: Library “self-check” system

Book return is also simplified that books can be returned (dropped) at any time through the counter (Figure 14 left) which has opening at the out of the library. This drop box is fitted with ergonomic spring actuated movable bottom bed.

Figure 14: Book return counter (left); hand held RFID scanner (right)

The returned books scanned manually and automatically the book issue records are updated. To take stock of the books on the racks a hand held RFID scanner (Figure 14 right) is used. It is quick and less laborious. Reminder E mails are automatically triggered and books can be renewed online for the books not reserved. Online books reservation facility is available. The

reserved books are kept in the “hold shelf” (Figure 15 left) on receipt with a tag contains the identification of the person reserved it. There is a small meeting room with full-fledged Audio-Video facilities for discussions among groups.

Figure 15: Library “Hold shelf” (left); Library feedback system (right)

The individuals can watch videos contents in big screens. There is a feedback system (Figure 15 right) located at the exit where the user can record the ratings of their library experience. This helps RMIT to constantly upgrade and update them-selves based on the feedback; also it helps to measure the footfalls.

Research lab facilities:

RMIT has the state of the art research lab facilities apart from NATA accredited, independent laboratory for commercial testing services. Very rare of its facilities is the Newton Thermal Manikin System (Figure 16 left) by Thermetrics USA.

Figure 16: Newton Thermal Manikin System (left); Pregnant dummy (Right)

Newton is a complete turn-key thermal manikin system used world-wide for a broad range of clothing and environmental testing. Newton is an articulated 50th percentile Western or Asian Male body form, in sweating skin format. The manikin is constructed using a thermally conductive carbon-epoxy composite shell with embedded resistance wire heating and sensor wire elements. Standard zone configurations include 20, 26, or 35-zone models, but Newton's thermal properties can be customized for higher sensitivity, faster transient response, greater ambient range, or outfitted for other research capabilities. Walking, breathing, physiological (human comfort) software, and female conversion accessories are also available. Newton systems include manikin form, control electronics, laptop PC, and exclusive ThermDAC software.

Other popular instruments are KES-FB4 - Surface friction and variation tester, Instron 5565 A, Moisture Management Tester (MMT), Pregnant dummy (Figure 16 right), Datacolor spectrophotometer, Sweating Guarded Hotplate tester, Non-woven thickness tester, Atlas Ci4000 Weather-O-meter, Electro spinning, Fourier transform infrared spectroscopy (FTIR), TC^2 3-D body scanner etc. RMIT has close tie for research with the leading research organization Commonwealth Scientific and Industrial Research Organization (CSIRO).

New Initiatives/Proposals:

For the Production Planning subject second year students of the Associate Degree - Fashion Design & Technology program carryout a project of 8 weeks duration to develop a product from design to sales of a particular brand. This work is carried out in groups. This is a replica of the model by which a brand buying office functions in Australia. While design, fitting, costing, market study etc. are carried out in Australia, they get their samples and mass production done at off shore facilities. Similar to this students of RMIT can play the role of buying office and the students of NIFT (3^{rd} Year BFT program) can play the role of manufacturer and stitch final samples as per the specification given and send back to RMIT. RMIT will facilitate transport of fabric, patterns and accessories to NIFT and the finished garments shipped back to RMIT. By this exercise there will be a lot of interaction/exchange of ideas will take place between a student group in RMIT and the parallel student group in NIFT apart from learning the role of buyer-manufacturer. RMIT has given approval for the same to be carried out in the coming semester in the months of August/October 2016. Mr. Nishan Heenpella, faculty of Associate Degree- FDT will coordinate with me.

A presentation on the Research projects carried out under my supervision in NIFT Chennai DFT programs has been submitted for viewing of the students of Associate Degree- FDT for their inspiration. Ms. Natasha Kilgour, faculty of Associate Degree- FDT facilitates this.

Discussions were carried out with Prof Robyn Healy, Head of School and Dr. Jo Cramer, Program Manager, Bachelor of Fashion (Design)(Hons) to revive and have more student exchanges between NIFT and RMIT under semester exchange program in the coming year. NIFT Chennai will take initiative to remove hurdles if any in facilitating this program.

Exchange of thoughts with Dr. Claire Beale, Lecturer BA Textile Design program has opened more avenues to facilitate interaction between the Textile Design students of NIFT and respective RMIT students. NIFT Chennai will get help from them to develop a blog similar to the one they have http://batextiledesign.com.au/ so that students can display their works which can be viewed by the counterparts in RMIT.

Discussed with Prof. Rajiv Padhye and Dr. Lijing Wang for the possibilities of collaborative research on developing novel light weight bullet proof garment and special functional garments as research projects of NIFT BFT department UG/PG programs. In this regard further course of action and Institute approval will be processed after NIFT Chennai sends the research proposal in these areas.

Suggestion:

Since there is no/very less manufacturing in Australia, the students though view videos of garment factories, lack first hand exposure to manufacturing. This can be compensated, if not completely, at least to some extend by setting up of a small Unit Production System (UPS) production line comprising about ten machines within the campus and can be run by the students. Small quantity orders to make uniforms etc. can be under taken and it will be of great learning experience.

TBIS-APCC 2016 –Symposium and Conference:

TBIS-APCC 2016 – 9th Bioengineering and Informatics Symposium (TIBIS) & 6th Asian Protective Clothing Conference (APCC) was going on at RMIT which was a pleasant surprise and I had an opportunity to register for the same for two days. The conference was helpful in developing contacts with researchers worldwide apart from the knowledge gained through the papers presented on the advanced research in the areas of Fashion/Apparel.

Figure 17: At TBIS-APCC 2016 Conference with Prof. Rajiv Padhye and Dr. Lijing Wang

To mention a few, a paper by Prof Inui Shigeru, Shinshu University, Japan on “Tucking dart in the virtual world” a work on virtual draping on 3D dress form and flat pattern development using Mass Spring Model for cloth, Leap Motion (sensor) for hand model. Another paper by Dr. Sonoka Ishimaru, Manager Comfort Clothing Group, Japan on “Smart clothes using stretchable conductive paste”, a paste coated on the fabric long lasting several washes and makes the fabric conductible. Prof Xianyi Zeng, ENSAIT, France presented a paper on “Development of a consumer-centered collaborative 3D garment design process by integrating designer’s knowledge and human perception”.

Deakin University visit:

As part of the TBIS-APCC 2016 conference a visit to Deakin University at Geelong was organized where we could see all the research facilities including their carbon fiber manufacturing facility “Carbon Nexus” (Figure 18 left) and interact with research experts to know their current research areas. Nano filament (Figure 18 right) and Nano short fiber producing and Nano fiber coating facilities are available for research.

Figure 18: “Carbon Nexus” (left) and Nano yarn spinner (right) at Deakin University

We got explained about the current researches going under the project Future Fiber Hub. The topics covered were, Nano fiber application on protective garments, natural Nano fibers by Prof Tong Lin, carbon fiber composites Dr. Luke Henderson, fiber powder- recycle from natural fibers by Dr.Rangam Rajkhowa and Protective functions of silk cocoons by Asso. Prof Jingliang Li.

Conclusion:

The whole experience of visiting RMIT is an academically fulfilling and satisfying one and it has been kindly offered to me by IFFTI and RMIT at a very crucial juncture of in need of world class exposure to do justice to the teaching position I hold for more than two decades. The whole of RMIT was opened for me and I could access all the facilities by the kind effort of Ms. Tina Guglielmino, Deputy Head Vocational Education & Training as approved by Prof Robyn Healy Head of School. For the uncountable benefits reaped from RMIT I will try to give back at least a small portion by being an instrumental in materializing interaction and exchange of ideas between the students of RMIT and NIFT in the areas of design and manufacturing so that both of them learn and gain knowledge.

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With Team RMIT