

# Joined German-Chinese Studies in Printing Technology

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## Joined German-Chinese Studies in Printing Technology

82<sup>nd</sup> Annual IGAEA Conference at  
The Rochester Institute of Technology

July 2007

**Thomas Hoffmann-Walbeck**  
Stuttgart Media University

## Agenda

- ▶ Outline of the German-Chinese program
- ▶ Differences in the academic structures between China and Germany
- ▶ The University of Media (Germany) and Technical University Xi'an (China)
- ▶ History of co-operation
- ▶ Structure of our German-Chinese study programs
- ▶ Intercultural challenges
- ▶ Key factors for a successful partnership
- ▶ Future steps

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## The Outline of the Programme

- ▶ Joined programme in printing technology
  - » German and Chinese students study at their home university as well as the foreign partner university
  - » Curriculum is well-defined for both periods
  - » Lectures and lab work at the host university together with native students in the native language
  - » Exams are held in this language
- ▶ Language Courses in Chinese/German from the 1<sup>st</sup> year onwards
- ▶ Practical work in print shops in the partner country
- ▶ Symmetrical relationship
- ▶ Worldwide unique program

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## Why Co-operation? – German View

- ▶ China's sharp increase in print production
  - » Forecast of 70 percent increase from 2005 to 2010
- ▶ Globalisation
  - » German suppliers – like Heidelberger, MAN-Roland, KBA - and international printing companies and publishers need intercultural trained specialists in China and Germany
  - » More than 400.000 engineers got a university degree in China 2006
  - » Language and cultural barriers are still high  
Long-term relationships are needed

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## Leading Print Markets

Source: Pira International Ltd 2005

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## Chinese Universities - Statistics

- ▶ High increase of student numbers in the last decade
- ▶ Increase of number of universities
- ▶ High competition for acceptance at universities
  - » Gaokao: national/provincial standard entrance exams in Chinese, English, mathematics and natural/social sciences
- ▶ Number of university lecturers is doubled between 1998 to 2004

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## Chinese Universities – Tradition

- ▶ Focus on exams and learning by heart
  - » “stuffed ducks”
  - » Confucian tradition, civil servant exams
  - » Lack of equipment, lack of labs
  - » Practical work is considered to be inferior
- ▶ Campus life
  - » Students and professors live on the campus
  - » Students are guided thoroughly
    - Attendance lists, home-work sessions,...
    - “it’s hard to get in, but it’s easy to stay in”

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## Chinese Universities - Today

- ▶ After years of expansions, a consolidation phase is required
  - » Lack of qualified lecturers
  - » Universities have immense debts
- ▶ Big differences in academic levels between universities
  - » In general, big differences between east coast and the western areas
- ▶ Change of curriculum
  - » More and more social and practical skills are demanded

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## German Universities

- ▶ There is a distinction between „universities“ and „universities of applied sciences“
  - » The latter have less focus on theory and more on practical skills – but it’s not vocational training!
  - » A lot of students at a university of applied science do have a 3-year background of vocational training
  - » Example: Mechanical engineering (concerning printing presses) is taught at universities, the printing processes are taught at universities of applied sciences
- ▶ Recent transition from German diploma-degree to more international bachelor- and master degrees
  - » Studies for diploma last 4 years, for bachelor only 3 years

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## Statistics

- ▶ A small and specialized university of applied sciences
  - » 3200 students
  - » 110 professors
  - » 120 part-time teachers from the industry
  - » 65 technical assistants
  - » 65 university management staff
- ▶ 20 Bachelor and Master programs
- ▶ 2 campuses
  - » Faculties Print and Media and Electronic Media on general university campus

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## Stuttgart Media University

- ▶ 3 Faculties
  - » Print and Media
  - » Electronic Media
  - » Information and Communication
- ▶ Wide spectrum of media-education
  - » Printing technology, packaging, publishing
  - » Design, internet, advertisement
  - » Library science
  - » Economics
  - » Computer and information science
  - » Film and sound, electronic media

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## Main Campus

- ▶ One single building
  - » Part of it is about 30 years old, the other about 10 years
  - » New building will be constructed



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## Development of the Stuttgart Media University

- ▶ The „Hochschule der Medien“ started 2001 as a merger of two different institutions
  - » The University of Print and Media
  - » The University of Library and Information Science
- ▶ The University of Print and Media has its origin in a Technical College for Book Printing
  - » Founded 1903
  - » Until 1997 it was called „Technical University of Printing“

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## Multimedia



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## Faculty of Print and Media

- ▶ Bachelor-Courses
  - » Print and Media Technology
  - » German-Chinese Course of Studies in Print and Media Technology
  - » Media Computer Science
  - » Mediapublishing
  - » Print-Media Management
  - » Packaging Technology
- ▶ Master-Courses
  - » Packaging Design and Marketing
  - » Print and Publishing (Starting 2007)
  - » German-Chinese Course of Studies in Printing Technology and Management (Starting 2008)

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## Course Print- and Media Technology

- ▶ More than 220 students
  - » Each semester 30-40 new students
- ▶ Program Overview
  - » Natural science
  - » Printing technology (reproduction, layout, plate- and cylinder making, press, postpress)
  - » Labs for offset, flexo, gravure and screen printing, prepress, postpress
  - » Quality assurance, Production planning and control
  - » Business and project management
  - » High focus on projects
- ▶ Print Media Management is separate course with stronger focus on economics

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## Projects: Learning by Doing

- ▶ Focus on practical projects in order to learn how...
  - » ...to operate the equipment
  - » ...to analyse practical problems
  - » ...to communicate within a team
  - » ...to plan projects
  - » ...to learn
  - » ...to improvise
  - » ...to be creative
- ▶ Simulation of the real life
- ▶ Each student is required to work one semester in the graphical industry

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## Technical Labs



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## Practical Projects



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## Practical Projects



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## Stuttgart

- › Population of 600.000
- › 25 percent foreigners
- › Campus in suburb Vaihingen
  - › 15 minutes to the city with subway
- › Car manufacturer and vineyards
- › Close to Black Forest, Alps, France and Switzerland



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西安理工大学  
XI'AN UNIVERSITY OF TECHNOLOGY



## Technical University of Xi'an

- › 27,500 students
- › 1100 lecturers
- › 49 undergraduate programs, 66 post-graduate programs
- › 3 campuses



Terracotta army in Xi'an



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## Faculty of Printing and Packaging

- › Bachelor degree courses
  - › Printing Engineering
  - › Electronic Information Engineering
  - › Packaging Engineering
- › 3 Master programs
- › PhD program
- › Around 2000 students
- › 74 lecturers



One of the 3 TU Xi'an campuses

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## Curriculum

- › Bachelor program in 4 years
  - › First 2 years mathematics, chemistry, physics,...
  - › Quite high theoretical standard
  - › Printing technology only from 3<sup>rd</sup> year onwards
  - › Practical work in labs, but no big projects
  - › Little hand-on experiences in the industry
  - › Focus on technology, no training in management or marketing
  - › All classes are mandatory

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## CTP-Lab at the TU Xi'an



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## History of Co-operation

- 1985 First contact between Technical College of Shaanxi (from 1994 onwards: TU Xi'an) and Fachhochschule Druck (Later Hochschule der Medien)
- 1986 Contract between both universities. From that time onwards: Financial and technical support, exchange program for staff, joined symposia, delegations, industry projects
- 1987 Teletex communication established
- 1999 Joined study program "Printing Technology" founded
- 2008 Joined bachelor-program "Packaging" and the joined master-program "Print Technology and Management" will start

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## Cooperation Is Growing



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## German-Chinese Undergraduate Courses

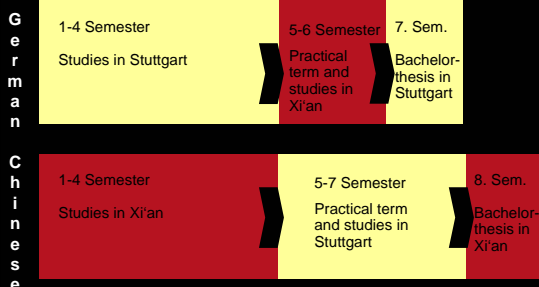
- ▶ German-Chinese Print and Media Technology
  - » Similar to studies in Print and Media Technology
  - » But less technology, Chinese language instead
  - » Program lasts 7 instead of 6 terms
  - » See Website „hdm-stuttgart.de/dc“
  - » Very demanding course
  - » Only 10-15 German students per year and 34 applications (average last 3 years)
  - » Currently 39 students on board
- ▶ German-Chinese Packaging Technology
  - » Analogue to in German-Chinese Print and Media Technology
- ▶ 2 Bachelor certificates for the students (double degree)



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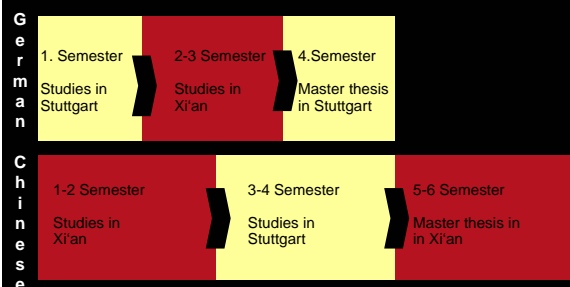
## German-Chinese Bachelor Programs



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## Master Program



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## German Students in Chinese Lectures in China



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## German-Chinese Print and Media Technology

### Technology

Natural sciences  
i.e. math, physics, computer science

Print- and Media Technology  
e.g. printing technologies, prepress, postpress, material science, measuring techniques

### Culture

Chinese Language  
(including writing)

Inter-cultural seminar

Calligraphy

### Management

Business Management

Cost Accounting

Production Planning

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## Statistics

- ▶ Around 30 Chinese students start learning German in Xi'an each years
  - » Only the best come to Stuttgart
- ▶ 36 students got their double bachelor degree so far
- ▶ 24 German students stayed in Xi'an until now
- ▶ 32 Chinese lecturers came to Stuttgart
- ▶ 7 master students came to Stuttgart
- ▶ Great job opportunities for the graduates
  - » International and, in particular, German companies
  - » Also national companies: students have a broader view and are more independent

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## Most Important Students' Qualities

- ▶ Open minded, tolerant
- ▶ Curious about foreign people and culture
- ▶ Interests in technology and languages
- ▶ Diligent
- ▶ Adventurous
- ▶ Ability to improvise
- ▶ Communication skills
- ▶ Sustaining power



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## Focus on Practical Work in Stuttgart

- ▶ Work in the labs, project work
- ▶ Each student is required to fulfil a practical term in the partner country
- ▶ Projects and final theses in co-operation with partners of the media industry
- ▶ Presentations and lectures by external experts
- ▶ Attendance of Workshops and symposia in the media industry
- ▶ Excursions

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## Excursion to a Print Shop



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## Trip to Switzerland



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## Games



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## Christmas Party at the HdM



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## What are the Challenges for Chinese Students?

- ▶ Home sickness
  - » Often the first time abroad
  - » Students have to organize their daily routines themselves
- ▶ Language barrier
  - » Swabian dialect spoken in Stuttgart
- ▶ Studies are not closely supervised
  - » Demands are high but often not explicitly stated
  - » Students are supposed to understand the underlying principles. Learning by heart is not enough
  - » Students have to organize their studies themselves
- ▶ Working in a company
  - » Being in time, showing motivation, long working hours
- ▶ The European food

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## What are the Challenges for German Students?

- ▶ Home sickness
  - » But German students are already a bit older than the Chinese
- ▶ Language barrier
  - » Xi'an dialect spoken in Xi'an
- ▶ "Culture shock"
  - » Manners, hygienic differences
  - » Hierarchy, organizational problems
  - » Some new rules, e.g. attendance lists for lectures
- ▶ Working in a company
  - » "Learning by watching" instead of "learning by doing"
- ▶ The Chinese food

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## Key Factors for Joined Programs

- ▶ Initiative and development
- ▶ Finance
- ▶ Implementation
  - » Multilingual persons in charge on both sides
- ▶ Harmonizing a joined curriculum
- ▶ Language courses and inter-cultural seminars
- ▶ Marketing and student selection
- ▶ Social support for the students
- ▶ Quality Assurance

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# Joined German-Chinese Studies in Printing Technology

## What's Needed?

- ▶ Language teacher for Chinese and German
- ▶ Trainer for inter-cultural seminar
- ▶ Contact person for foreign students
  - » Housing for students, visa, excursions, translations, preparing meetings, organizing the practical terms
- ▶ Responsible persons for the program
- ▶ Presidents, who supports the program
- ▶ Optional: scholarships for students
- ▶ Travel expenses for organisational meetings and delegations
- ▶ Funds for exchange of staff
  - » Internal marketing

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## Key Statements for Joined Programs

- ▶ The program sustains in the long run only if the relationship is symmetrical
  - » The program must give a benefit for students of both partner universities
- ▶ Native languages are crucial for the benefit
- ▶ Pre-defined joined programs are superior to standard exchange programs and individual foreign studies
  - » Higher success rate for the students
  - » No hassle with admission and acknowledgement
  - » Proven procedures instead of try and see
- ▶ Not so much extra costs involved
  - » Besides language classes no extra courses

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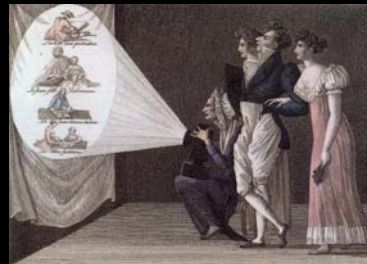
## Dreams or Future Steps?

- ▶ Broaden the program
  - » 1) Other courses together with the TU Xi'an
  - » 2) Same courses with other universities in other countries
- ▶ Second option means to expand from bilateral to an international program
  - » Possibility for students to choose modules at different universities in the native languages English, Spanish, Chinese and German
  - » Mutual acknowledgement of credit points
  - » Different language courses in each participating institution

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## Thank You for Your Attention!



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