

# **Internationalizing cooperative education: an introduction to the Berufsakademie Ravensburg's work-integrated cooperative education partnership with the multinational company SAP Incorporation**

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Received 13 February 2007; accepted in revised form 21 August 2007

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This paper introduces an innovative approach to cooperative education, between partners at the Berufsakademie Ravensburg, University of Cooperative Education, Germany and the multinational company, SAP Inc. First, the paper contextualizes the project with a brief overview of cooperative education's history and academic objectives, followed by an introduction to the process by which the Berufsakademie Ravensburg internationalized its cooperative education program through this project. Finally, the authors provide an overview of the SAP project, showing how a cross-country and cross-institutional project can develop intercultural management competencies, both for students and educational institutions. (*Asia-Pacific Journal of Cooperative Education*, 8(2), 109-119)

Keywords: Internationalization; cooperative education; management; multinational; Germany

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Internationalization has been the subject of study and comment in a range of academic fields, including cooperative education. The relationship between internationalization and cooperative education is both complex and dynamic. Educators believe that the field of cooperative education should contribute to international understanding, peace, and global connectedness. The acceleration of globalization in the last two decades has, to some extent, intensified debates about internationalizing cooperative education. Moreover, within the current era of globalization, market challenges have taken centre stage. A variety of important social, cultural, economic, and political developments that affect higher education have intensified. Market forces and corporate management ideas influence the way universities are being operated worldwide (Slaughter & Leslie, 1997). One important development is the increased pace of the internationalization of work-integrated learning programs at institutions of higher education.

The internationalization of cooperative education within higher education can be defined simply as the process of integrating international or intercultural dimensions into teaching, research and service functions of higher education institutions. It is a process by which cooperative education develops in a more international direction. The term internationalization of cooperative education is also used today not only within universities and colleges, but also by international organizations including the World Association for Cooperative Education (WACE) (see, Franks & Blomqvist, 2004). However, the term is used in a number of different contexts in literature, often without being precisely defined. There is

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also often some measure of confusion or overlap in literature with related terms such as ‘international co-op programming’, ‘international cooperative education’, ‘international co-op placements’, and ‘globalization of cooperative education’ (Coll, 2003; Reeve, 2004). In practice, internationalization of cooperative education usually refers to one or a combination of the following activities:

- The international movement of students between countries studying within a work-integrated learning program or at a university of cooperative education;
- The international movement of academic staff and researchers involved in cooperative education programs;
- Internationalization of cooperative education curricula in order to achieve better understandings about other people and cultures;
- International links between nation states through open learning programs and new technologies;
- Links between governments and institutions of cooperative education in different countries for collaboration in research, curriculum development, student and staff exchange, and other international activities; and
- Export education where educational services are offered on a commercial basis in other countries, with students studying within a work-integrated learning program either in their home country or in the country of the provider.

Cross-country cooperative project work has never been mentioned explicitly or in the literature to define the internationalization of cooperative education. In this article, the term internationalization of cooperative education is used to cover all of these various activities.

#### COOPERATIVE EDUCATION: HISTORY AND ACADEMIC OBJECTIVES

Traditional business education programs, particularly in the USA, while proficient in offering students theoretical knowledge, have long been criticized for failing to provide ‘real world’ application of that knowledge. Historically, cooperative education programs (and variations of the traditional coop, including those outlined above) have arisen and become popularized in response to this criticism, as a way to bridge theoretical and practical knowledge and allow students an opportunity to apply classroom learning through workplace praxis (Holt, Mackay & Smith, 2004; Mello, 1998).

Cooperative education has a long and successful history and much research has been done about its benefits for students, sponsoring companies and academic institutions (Cullen, 2005). Students gain exposure and valuable practice in various business cultures and work environments. This provides students with a better sense of their own abilities and a keener understanding of their own learning goals and outcomes. As Fleming and Eames (2005) posit, “a student exposed to the realities of ... industry may then have a greater sense of purpose and motivation for classroom learning” (p. 30). Coop students also gain a more realistic sense of what different companies have to offer and thus are able to make better employment choices (Ng & Burke, 2006).

Sponsoring companies gain access to a young, enthusiastic workforce, and more successful recruiting (Ng & Burke, 2006). According to Cullen (2005), some employers also experience cost benefits associated with cooperative education. Academic programs benefit from the integration of real world practice and academic learning as well as enhanced curriculum development and marketing opportunities.

Such alliances between business and academia may take on many forms: Traditional cooperative education or internships, faculty, student and/or staff exchange programs between academia and industry and many others. Strategic alliances between academic researchers and product development teams have long been fostered in many institutions of higher education. As Elmuti, Abebe and Nicolosi (2005, p. 115) argue:

Alliances between corporations and institutions of higher education have gained momentum in the last couple of years. As a result of the challenge brought about by global competition and the changing emphasis on research and development (R&D), institutions of higher education have become important parts of a cooperative agreement that tried to tackle complex, fundamental industrial problems of major business and societal significance.

The cooperative education program with the Berufsakademie (BA) Ravensburg and SAP, Inc., as described in detail below, is an important example of this kind of relationship; one which is rich with opportunities for continued research.

An important area of discussion in the research about cooperative education centers on the problems inherent in bridging different cultures; namely, the academic culture and the business culture. Clearly, the perceived shortcomings of the academic culture - its focus on theory instead of practice - are a result of clashing cultural values. Students experiencing cooperative education must learn to negotiate between the various values, behaviors, and attitudes of the two cultures. This sociocultural aspect of education, an integral part of cooperative education which “emphasize[s] the significance of context and the ... transitions between the context of the university and the context of the workplace” (Eames, 2003, p. 8). Such cultural and contextual issues become even more prominent when considering the internationalization of cooperative education.

The globalization of the world economy has clearly impacted the focus of business education, as the academic world works to keep pace with the dizzying technological developments that make the world seem to grow smaller day by day. This increase in the academic focus on globalization has spawned, logically, an increase in the internalization of cooperative education (Coll, Pinyonathagarn & Pamoolsook, 2003; Santomero, 2004). While not much has been written about the internationalization of cooperative education (Coll, Pinyonathagarn & Pamoolsook, 2003), many of the issues worthy of discussion with regard to the internationalization of cooperative education (co-op) have begun to center on cultural and communication issues. It is one thing for a German student to engage in a cooperative education placement with a German corporation - at the least they share a set of common assumptions and some basic knowledge about German culture. But the internationalization of cooperative education mean that in addition to negotiating the differences between academic and business culture, participants in international cooperative education may also have the added challenges and benefits of negotiating differences in national and regional cultures, lifestyle and/or language differences (Ward & Laslett, 2004) experienced when living in a foreign country. As Waryszak (1999) discusses in his study of an international cooperative education program in the hospitality industry, it is likely that the English language skills of co-op students (i.e. whether or not they are native speakers of English) have some impact on their level of socialization in an international placement. Even though the BA Ravensburg-SAP co-op did not involve travel, students still had to address cultural and language issues in the project, as discussed below. Almeti, Abebe and Nicolosi (2005) agree, arguing that effective communication between all the involved constituents is the cornerstone for effective cooperative ventures.

In a work by Coll, Pinyonattagarn and Pramoolsook (2003) exploring Thai student perceptions of international placements, the authors explain that one of the primary benefits to students from international cooperative education was the improvement of their communication skills, “specifically their English language skills” (p. 3). In addition, the Thai students acknowledged a better understanding of cultural differences and how those differences can impact workplace practices. Interpersonal skills were also cited as benefiting from the international placement.

It is likely that international cooperative education will continue to grow (Göhringer, 2002). While an international co-op placement is surely valuable experience for those pursuing careers in today’s global economy, however, it also presents many more potential hurdles for students, faculty and business sponsors to attend to (DeLange, 2002). Issues such as immigration, language difficulties, and many others will provide much opportunity for future research.

The internationalization of cooperative education can only help to further educate all constituents in the varying manifestations of crosscultural differences. The result will be to train a young workforce with a more global perspective and a more realistic sense of how to negotiate differences when various cultures merge. The program with the BA Ravensburg and SAP Inc. provides a glimpse into what this will look like in practice.

#### A BRIEF HISTORY OF THE BA RAVENSBURG AND ITS INTERNATIONALIZATION

From its inception (quite unintentionally, but fortuitously), the BA Ravensburg was determined to share the work-study model with other countries around the world, to take advantage of this work-related educational model. The partnerships and exchange activities described below demonstrate interest in the BA Ravensburg by other educational institutions worldwide and show the range of internationalization of the BA Ravensburg in terms of student exchanges, international coop placements, staff exchanges and system transfer.

##### *Foundations of The Berufsakademie Ravensburg*

The BA Ravensburg was founded in 1978, starting with two programs: mechanical engineering (19 students), and management for industry (24 students). The 43 students who started studying at the BA Ravensburg were simultaneously contracted with companies. This model program still practiced at the BA Ravensburg is unique compared to that of higher educational institutions offering work-integrated learning programs or work placements. In order to be accepted, students must possess a university entrance degree and must be contracted with a company or a governmental institution for three years. Therefore, the participants of this work-integrated study model are both students and employees. At that time, international activities were nonexistent.

The first step towards internationalization occurred in 1995. During this year, approximately 1,000 students (800 students within business administration, 200 in technical programs) were studying at the BA Ravensburg. Tourism and hospitality management, in particular, were growing departments at the school of business. Typically, because of the travel-related nature of these programs, students/employees in these disciplines are more internationally-oriented. It is therefore, not a surprise that the head of department of tourism management initiated the first ‘international activity’ of the BA Ravensburg. A formal agreement for student and staff exchange was signed with the University of the West of England (UWE), Bristol, England. As a result of signing a Memorandum of Understanding,

the BA Ravensburg joined a network of several European universities: Universidad de la Islas Baleares, Palma de Mallorca, Spain, IUP, Université de Perpignan, Perpignan, France, ESTHUA, Université d'Angers, Angers, France. This network connection is still important today, because staff as well as student exchanges continue. Moreover, each academic year two students (best applicants) continue to study within double degree program at the UWE. These students, if they are successful, receive a dual degree: a BA (Berufsakademie) Bachelor degree plus a Bachelor of Honours degree from the UWE.

A major step towards internationalizing the BA Ravensburg was the implementation of the international office in October 1997. It was important that the person heading this office have academic background, in order to better understand the needs of students. The October 1997 date is also 'key' because the extension of partnerships within the European SOKRATES program developed quickly thereafter (German Ministry of Education & Research [GMoER], 2005). SOKRATES is a program of the European Union that financially supports networks and student and staff exchanges. It was implemented when the Bologna process started. The aim of the Bologna process is for all universities within the European Union to offer comparable bachelor and master diplomas and for every university to accept credit points given at other universities within the European Union (GMoER, 2005).

Between 1997 and 2000, the following partnerships were established, not only for the tourism faculty but for all of the other faculties within the business school of the BA Ravensburg: Napier University, Scotland, De Montfort University, England, Mikkeli Polytechnic, Finland, Esbjerg Business Academy, Denmark, The Danish Business Academy, Denmark, Universidad de Alicante, Spain, Universidad de Extremadura, Spain, Universidad de DEUSTO, Spain, Université de Poitier, France, Hogeschool Zeeland, Avans Hogeschool, Fonty's Hogeschool, Plantin Hogeschool all in the Netherlands, in Belgium the Haute Ecole de la Ville de Liège and Plantijn Hogeschool, in Italy Università La Sapienza and Università degli Studi di Napoli. Most of the named universities offered some version of a coop or learn-integrated program at their school, but none of them operated as a cooperative university as fully as the BA Ravensburg.

At the same time, overseas partnerships in Brazil and Canada were established, again initiated through the department of tourism management. This was still a period of mostly staff and student exchanges; there was no joint research with the partnering institutions or joint curriculum design done, nor much thought about the transfer of the BA study model to partnering universities. Each academic year within this period, outgoing students numbered 20, while the number of incoming students was approximately 25. A maximum of five lecturers' incoming and outgoing marked this period of international activities at the BA Ravensburg. This period was also characterized by the beginning of processes to organize international work placements by using the contacts of the partnering universities. An exception was, and still is, students studying International Marketing/International Business. This program has been changed slightly and therefore was renamed International Business this year. For these students, work placements, in Germany or in another country, have always been compulsory.

### *Developing Partnerships*

The period from 2000 to 2006 saw the transfer or export of the dual system of the BA to other countries, mainly Columbia, and to some extent Indonesia (Reinhard, 2006). Within these six years, five institutions in Columbia in Bogota, Armenia, Medellin, Bucaramanga and Cali were created, all modelled closely on the BA model (for description of BA model, see also

Reinhard, 2006 & Göhringer, 2002). The Columbian BA is, however, a four year program unlike the three year program in Germany.

The attempt of establishing the BA model in Indonesia is as follows. Last year, the State University of Jakarta, the Universitas Negeri, started two bachelor's co-op programs, one called International Business Administration; the other, with the main focus on accounting, was named Business Administration. These programs were set up in the department of economics under the supervision of Agung Waspodo and Yasser Arafat. Both used the BA model when lecturing at the BA in Ravensburg. At this time, the theoretical course study has been implemented successfully; however, partners for on-the-job training out of industry have not been convinced to join the program.

In addition, further partnerships also began in this period, in the United States of America with Johnson & Wales University in Rhode Island, in New Zealand with Nelson Marlborough Institute of Technology, and in South Africa with the University of Johannesburg and Vaal University of Technology. A MoU has recently been signed with the University of Cape Town. These partnerships include student and staff exchanges, but also, this has been the start of a program of 'internationalizing research' within the BA Ravensburg, starting with the University of Johannesburg, and with Johnson & Wales University.

As a result of the partnerships - actually the World Association for Cooperative Education (WACE) was the reason for partnering with South Africa, see below - numerous international opportunities for project work and research increased. A few examples are mentioned. First the Berufsakademie Ravensburg is a member of WACE. Second it is a member of TEMPUS, a European educational development program for 'third countries' other than the United States. The intent of the program is the development and design of study programs/models. Third, is the EU (European) - Canada Program. Here the intention is to network with three Canadian universities and three European universities to develop, update and improve curricula, as well as to increase student and staff mobility with the two 'continents'.

The BA Ravensburg now has more than 2,200 students (1,700 business & 500 technical). Each academic year the number of incoming and outgoing students has increased to 50. The number of outgoing staff is approximately 15 and the number of incoming staff between 15 and 20. The authors believe that the next step towards internationalization should be developed through joint projects like the one with the BA Ravensburg and SAP Inc. described below. This program includes a new approach with many activities: student exchanges, staff exchanges, joint research and curriculum design. The first project with SAP Inc. and the Berufsakademie is discussed below.

#### THE WORK-INTEGRATED PROJECT WITH SAP INC.

Founded in 1972 as Systems Applications and Products in Data Processing, SAP Incorporation is a recognized market leader in providing collaborative business solutions for all types of industries and for every major market. Serving more than 36,200 customers worldwide, SAP is the world's largest business software company and the world's third-largest independent software provider overall. Today, SAP employs more than 38,400 people in more than 50 countries.

In-depth knowledge of software users is the key to the successful leverage of SAP software. Only if the user understands the concepts, has the skills to deal with the user interface, and employs the creativity to use the software in a new way, will SAP customers get the most out of their software solution and make their business run efficiently.

It is no surprise then that customers spend considerable time and effort on user training and software documentation. They create their own training materials and workshops, spending many days on content development. Often, there is an additional need to create customer-specific documentation. Training and documentation are thus an important expense factor, and can significantly increase the total cost of product ownership.

SAP Inc. has recently developed a new training and documentation concept using e-learning technologies embedded in the workplace of business software. This approach helps SAP customers to reduce their training and documentation efforts significantly. With the new approach, users are trained while they are using the software. Instead of attending off-site workshops and learning content that is unspecific to their software tasks, users learn exactly what they need to know when they need it. For the success of the new documentation and training approach acceptance in different markets and cultures is key. SAP Inc. already knows from past research that there is cross-cultural difference with regard to online learning, for example, citizens of the USA are more open to standardized tests than others. To ensure the success of its products, SAP Inc. is very interested in discovering and balancing such cultural differences.

#### *Project Goal*

In this context, SAP Inc. initialized an international project to research the acceptance and effectiveness of the new training and documentation approach in different cultures. Described in brief the goals of this usability study were to:

Determine the overall usability of the new training and documentation framework and user interface:

- Overall study findings were based on task performance and participant feedback.

Determine how useful and relevant content and format are to users:

- Readability and helpfulness in the voice-over pattern trainer;
- Readability and helpfulness in the text-based learning mode; and
- Readability and helpfulness in the application help mode.

Determine how well end-users learn with the new training and documentation:

- Impact of the voice-over user interface pattern trainer on basic navigation through the application;
- Impact of the text-based learning mode on using the actual application; and
- Impact of the help mode on resolving specific problems in the application.

Examine learning effectiveness and task proficiency by testing three groups:

- Full treatment group: this group was administered the user interface pattern trainer demo and the learning unit before completing tasks on the live system;
- Partial treatment group: this group was administered the learning unit before completing tasks on the live system; and
- Control group: this group was asked to complete tasks on the live system without any exposure to the pattern trainer or learning unit.

Identify usability issues that require refinement, including:

- Self-evidency of functionality;

- Navigation;
- Task flow; and
- Usability and affordance of detailed design elements.

### *Project Setup*

SAP Inc. decided to run this research project in cooperation with User Centric Inc., the BA Ravensburg, and the Johnson and Wales University, Providence. The research methodology was developed together with User Centric, Inc. User Centric is a design and usability consulting firm that provides user-centric design and user research services. User Centric also conducted the usability study at its dedicated usability test facility in downtown Chicago. The new training approach was tested with prescreened participants during one-to-one usability sessions with a live moderator.

The study was repeated in Germany together with the BA Ravensburg to take advantage of the international network of this institution and its experience in this kind of research. In return, the German students and academic staff of the BA Ravensburg were able to take part in an international project with strong business focus. The students did not only help to design the German study but also helped to compare the data and results that were collected in Germany and the United States. Additionally, students from the Johnson and Wales university researched specific usability issues related to the use of simulations instead of real training systems. The studies were conducted from Aug 2006 to July 2007. Overall 130 (79 in the USA) participants were observed and interviewed using the new training and documentation approach. Table 1 gives an overview of the studies.

TABLE 1. Overview of Studies of the Internationalization of Co-op

	User Centric Inc.	BA Ravensburg	Johnson & Wales University - Providence
Location	Chicago	Ravensburg	
Aug. - July 2007	64 participants	51 participants	15 participants

### *Project Results*

The students analyzed and summarized the data, and revealed several interesting findings. For example, students discovered that business terminology is used differently in Germany and the United States, and that those differences can impact training effectiveness. In the end, students presented their results in English to the management of SAP Inc., and made recommendations for product improvements. The major findings were:

- The participant data clearly indicate that the new training and documentation approach did help participants to use business software more efficiently. Based on task success rates during use of the live business software, participant groups that were exposed to the new training were significantly more successful than the control group;
- The positive effect of the new training approach is also noticeable when comparing the average number of assists required to complete the live tasks. Full treatment group participants required the least number of assists to complete their tasks. The control group needed significantly more assists than either the full or partial treatment groups;

- Both full and partial treatment groups were asked to complete a questionnaire following their completion of tasks on a live business software. Overall, the full treatment group indicated a somewhat higher level of satisfaction than the partial treatment group and the control group. The difference was most noticeable between the full treatment group and the control group; and
- Characteristics of effective simulations are: It actively engages the users and forces users to learn from the consequences of their actions and it gives the user full control over pace.

#### BENEFITS OF THE WORK-INTEGRATED PARTNERSHIP WITH SAP INC.

First, students benefited from the international design of the learning experience, because they were introduced to problem-solving in an authentic international business environment. Second, learning guided by internationally-experienced academic educators and internationally experienced educators out of industry with a different cultural background helped students to gain international knowledge and crosscultural maturity. Furthermore, intercultural-oriented interviewing skills and international oriented social skills were achieved, far beyond skills that are usually achieved in a 'regular lecture/program'. In addition these students obtained an increase in technical knowledge and skills through discipline-related professional practice utilized worldwide.

Research about the benefits of the internationalization of cooperative education usually relate to students rather than the educational institutions themselves (see, e.g., Coll & Chapman, 2000). However, through this project's link with overseas industries, the academic staff of the BA Ravensburg were able to develop their international expertise as well, particularly lecturers teaching within the international business program. The program offers significant benefits to the BA Ravensburg staff who are motivated by the needs of internationally-operating companies to offer relevant course material that leads to graduates who will be perceived as internationally employable. In addition, academic staff of the BA Ravensburg benefited from critical evaluation by SAP Inc. of the teaching practices when doing a co-op project. Being involved within this project allows academics of the BA Ravensburg to see students as active members in the constitution of international co-op.

Overall the positive outcomes of doing this co-op project, in terms of 'internationalizing the institution' for the BA Ravensburg, are many. This multifaceted, joint, international project with the partnering SAP Inc. provided a stimulating, exciting and flexible educational environment. Universities, in particular Universities of Cooperative Education are continually being asked to think outside the box, to re-conceptualize curricula in response to the increasingly internationalized work place and to accommodate the changing expectations of students and staff. This project modernizes co-op to make it well-placed to meet the increasingly internationalized environment of the world of work. This kind of cooperation of educational institutions and international oriented industries provides ample opportunities and rewards for students, for staff development and for industry interaction in an increasingly international environment for both academics and industry.

#### CONCLUDING REMARKS

The partnership between the BA Ravensburg and SAP, Inc. has been a 'win-win' experience for all those involved. SAP Inc. has gained valuable insights into the usability of their products and the cultural dimensions of e-learning through the testing. Students have gained

global work experience and exposure to the implications of cultural factors on workplace issues. In addition, this project has provided the BA Ravensburg with opportunity for important academic research in a variety of areas, including adding another international dimension to its already established co-op study model. This will likely continue as the partnership has already expanded to include studies at Johnson & Wales University in the United States in early 2007.

The success of the study from both the academic perspective and the institutional perspective indicates that international co-ops such as this have the potential to continue to grow in number and variety. In addition, this study has pointed the way for new directions in international co-op. Further studies will likely broaden in scope as we continue to explore the impact of cultural and language differences in the international marketplace.

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## ABOUT THE JOURNAL

The Asia-Pacific Journal of Cooperative education (APJCE) arose from a desire to produce an international forum for discussion of cooperative education issues for practitioners in the Asia-Pacific region and is intended to provide a mechanism for the dissemination of research, best practice and innovation in work-integrated learning. The journal maintains close links to the biennial Asia-Pacific regional conferences conducted by the World Association for Cooperative Education. In recognition of international trends in information technology, APJCE is produced solely in electronic form. Published papers are available as PDF files from the website, and manuscript submission, reviewing and publication is electronically based.

Cooperative education in the journal is taken to be work-based learning in which the time spent in the workplace forms an integrated part of an academic program of study. Essentially, cooperative education is a partnership between education and work, in which enhancement of student learning is a key outcome. More specifically, cooperative education can be described as a strategy of applied learning which is a structured program, developed and supervised either by an educational institution in collaboration with an employer or industry grouping, or by an employer or industry grouping in collaboration with an educational institution. An essential feature is that relevant, productive work is conducted as an integral part of a student's regular program, and the final assessment contains a work-based component. Cooperative education programs are commonly highly structured and possess formal (academic and employer) supervision and assessment. The work is productive, in that the student undertakes meaningful work that has economic value or definable benefit to the employer. The work should have clear linkages with, or add to, the knowledge and skill base of the academic program.

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Manuscripts and cover sheets (available from the website) should be forwarded electronically to the Editor-in-Chief directly from the website. In order to ensure integrity of the review process authors' names should not appear on manuscripts. Manuscripts should include pagination, be double-spaced with ample margins in times new-roman 12-point font and follow the style of the Publication Manual of the American Psychological Association in citations, referencing, tables and figures (see also, <http://www.apa.org/journals/faq.html>). The intended location of figures and diagrams, provided separately as high-quality files (e.g., JPG, TIFF or PICT), should be indicated in the manuscript. Figure and table captions, listed on a separate page at the end of the document, should be clear and concise and be understood without reference to the text.

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