Research Assessment 3

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Subject: Introduction to SAP Software

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Michael Rosemann, & Amelia A. Maurizio. (2005). SAP-related Education -- Status Quo and Experiences. *Journal of Information Systems Education*, *16*(4), 437–453. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=19398771&site=ehost-live

Assessment:

As my research about SAP curriculum in colleges around the world and exploration through the article "SAP-related Education -- Status Quo and Experiences" continues, I have come to the conclusion that developing my knowledge in SAP-related software (and essentially any other software in the field) will be most beneficial for me in the future in regards to finding a good employer. Although I don't have a certain software that I want to pursue in consultancy, I know for a fact that having knowledge about SAP will be very helpful for me to become a successful consultant. As the surveys about SAP incorporation in institutions around the world continue through this reading, they focus mainly on time the subject was introduced, how long it took the subject to receive recognition, and how universities interact with one another in order to get the best outcome from the subject for their students.

The reading this week started off by comparing the results of the use of SAP University Competence Centers (UCC) vs the administration of a university's own SAP application. Many universities prefer hosting their own SAP applications for student use, but overall, the use of SAP UCC was found as the most successful concept for SAP growth in colleges. This makes sense to me because there isn't much use continuing the same process to learn a subject. It is more productive to discuss and collaborate with many universities to update information regarding one subject. I think the more colleges share ideas about the administration of SAP in university learning, there would be far better results in the growth of this software. As it goes on, the article begins discussing the growth of customers in SAP UCC. In five years, more than 90% of universities became customers of SAP UCC and members of the SAP University Alliance. I found this increase interesting because the growth of SAP UCC also reflected the increase in student interest in this subject. It says that "student demand for SAP knowledge [increased] after it was introduced into the curriculum" reflecting the fact that SAP UCC has created a lasting impact on the growth of SAP.

The part that interested me the most in this reading was the fact that there is an "increase in employer demand for students with SAP knowledge." The way I see it is that in the next few years, SAP will become one of the most known and leading softwares around the world.

Although it is already viewed as highly important for many businesses, I think it still has yet to make a breakthrough. In a few more years, my prediction is that SAP software classes will be offered not only in colleges, but high schools as well. Looking at the rate of satisfaction in this week's reading I truly believe this subject will be taught at much earlier ages. Not only is the software growing, students who are taking business classes are growing as well according to my research. So as the business sector grows, SAP is bound to grow.

The part that made me upset out of this entire reading is the fact that the focus of SAP classes is targeted at primarily graduate students. This means that students who are interested in becoming SAP engineers, consultants, etc have to wait till after Bachelor's degree classes to learn more about the subject. I would rather have colleges teach more about SAP software in the Computer Science, IT, and Computer Engineering Bachelor's courses rather than having to wait till after undergraduate to learn about the field. But at the same time it makes sense to me that it is only offered after undergraduate because SAP is still a growing subject.

Innovation Congress	training courses	pages	help

Figure 5. Learning SAP

hurdle on the way to successful ES education. Thus, it is not a surprise that hosting solutions are of increasing popularity in the context of ES education.

In this section we tried to find out the actual status of how SAP solutions are managed. An institution can either host its own SAP solution, use a SAP UCC, be a SAP UCC itself or use a third party to host SAP. The survey found that approximately 60 % of all participating institutions are a customer of an SAP UCC. Around 30 % of the institutions (still) host their own SAP solution. 22 responses came from universities which are SAP UCC themselves. In total, 285 responses were received in response to this question. Figure 6 shows the detailed results.

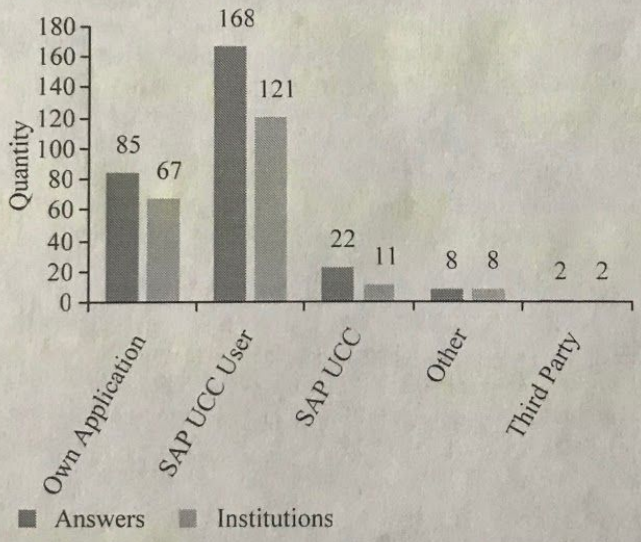

Figure 6. Distribution of SAP solution source

The very high number of SAP UCC customers shows the successful roll-out of this concept. A few respondents stated alternative setups. This included also mixed solutions, e.g. hosting a part of the SAP landscape and accessing a hosted solution for other more specialised components (e.g. CRM, Data Warehousing, and Strategic Enterprise Management). In individual cases, solutions provided by an SAP lab or the official SAP training platform are used.

University Competence Centers
⇓
Special centers specifically used for SAP learners. Only a few are in the world.

SAP software use growing in universities along with the use of different solutions

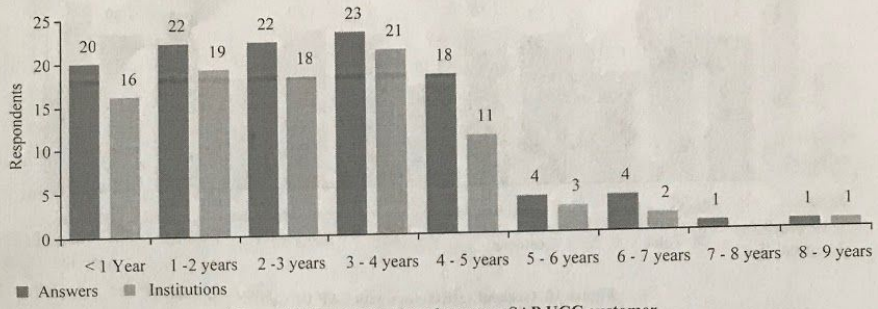

Figure 9. When institutions become a SAP UCC customer

4.6 Hosting the own SAP solution

For the institutions that stated that they host their own SAP solution, we asked whether they would consider using a SAP UCC in the next 12 months. Only 68 of the initial 85 respondents answered this question (Figure 7).

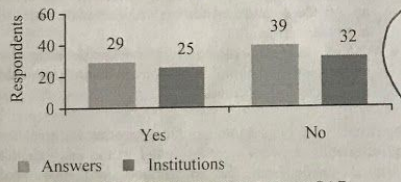

Figure 7. Will you consider being a SAP UCC customer in the next 12 months?

A narrow majority of those who host their own SAP application stated that they do not plan to use a SAP UCC in the near future. However, 29 respondents from 25 different institutions answered 'yes' to this question, stating that they may consider switching to a SAP UCC. A reason for not switching to a SAP UCC is often the significant investment made into the setup of the own solution.

In addition to the pure demographics, it was interesting to explore how satisfied the respondents were with their onsite SAP administration. Overall, the response indicated reasonable satisfaction in terms of response time, quality of response, and system performance as measured by a five point Likert scale with 1 being 'very satisfied' (Figure 8).

4.6 SAP UCC customers

For those respondents who were customers of an SAP UCC, we asked when they became a member. More than 90 % became an SAP UCC customer in the last five years.

The results show that there was a steady increase of members five years ago (Figure 9).

The interest in a hosted solution is quite consistent over the last five years. The answers come from 115 participants in 91 institutions.

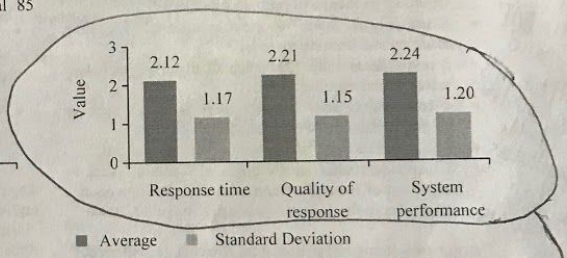

Figure 8. Satisfaction of on site SAP administration (hosting own application)

Again, we explored the satisfaction of users of an SAP UCC. The satisfaction was measured in terms of response time, quality of response, system performance and also value for money. The feedback came from 16 respondents who are an SAP UCC and 115 SAP UCC customers (Figure 10).

The general trend is that respondents who access SAP solutions through a SAP UCC, which they host themselves tend to be more satisfied with their own performance than their customers. However, it is important to note that in all of the three criteria response time, quality of response and system performance customers of a UCC were more satisfied than those respondents who used their own system. The comparison of Figures 9 and 10 provides a convincing case for UCCs.

4.7 Cross-University Collaboration

The first question in this section was whether the respondents have entered into collaboration with any other institutions in their SAP-related teaching activities. Only 30 % of the respondents answered "yes" for this question and 70 % stated that they do not collaborate with other institutions. Those respondents, who stated that they do

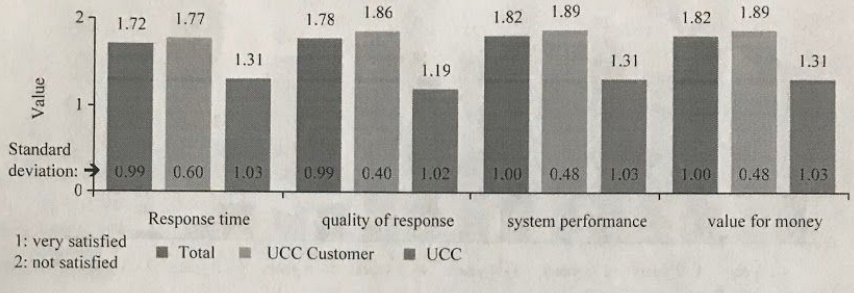

Figure 10. General satisfaction with SAP UCCs

Seems like both SAP UCC and institution's own systems are both advantageous in their own ways

collaborate, had the chance to further specify the exact types of collaboration they experienced. 39 answers were received providing among others the following feedback:

- 15 respondents state "exchange of experience" including exchange of problems and ideas
- 8 respondents state "developing material" including teaching and training material
- 5 respondents state "exchange of material" including teaching and training material
- 4 respondents state "collaborative lectures" such as having collaborative courses and joint lectures
- 2 respondents state "exchange of students and staff"
- 1 respondent state "create practical scenarios" such as depiction of a supply chain with different universities as players in the scenario (see e.g. Klose et al. 2004).

The top two items suggested were "exchange experience" (38 %) and "developing teaching material" (21 %).

The second question extended the first one. We asked the respondents if they would be interested in collaborating with other institutions in their SAP initiative. An impressive majority of 76 % stated that they were interested in collaborating. Only 24 % stated that they were not interested. The following answers are from those respondents who completed this part (140 answers were documented).

- 38 respondents state "exchange of experience" such as sharing teaching experiences and knowledge
- 22 respondents state "exchange of material" including case studies, course material, exercises and virtual learning material
- 19 respondents state "exchange of courses" including exchanging and sharing curriculum
- 18 respondents state "collaborative lectures" such as development of curriculum and conjoint courses
- 18 respondents state "developing material" including teaching material, case studies and exercises
- 8 respondents state "exchange of students and staff" including exchanging faculty members, lecturers and (research) students
- 6 respondents state "research", some suggest research on ES adoption, institutionalization issues, and sharing research opportunities
- 5 respondents state having "regular meetings" such as attending workshops, discussion forums, user groups and seminars
- 4 respondents state collaborating on a "particular SAP module" such as CRM, PS, PM
- 2 respondents state "creating practical scenarios" between schools to simulate actual business and setting up vendors and customers to simulate real-life examples
- Others suggest collaborating on conferences and publications, teaching improvement and special skill set such as process modeling

The results were placed into similar categories and irrelevant and erroneous answers were excluded in the analysis. The clustered results can be categorized into two broad dimensions. The first focuses on collaboration in teaching (54 %). The second focuses on course material (29 %), more specifically, the exchanging of it or its collaborative development.

In the third and final question of this section, we asked if there was collaboration across faculties or colleges *within* their institution in their SAP-related teaching activities. 46 % of the respondents answered "yes" to this question. The following is a list of answers (52 documented) from the respondents who provided further details. 14 respondents state "conjoint lectures" such as coordination of courses and development of case studies

- 13 respondents state "exchange of experience" such as having informal discussion, informal sharing of ideas and advice.
- 11 respondents state collaborating within "specific school or faculty" such as Accounting, Business, Engineering, IS and Mechanical Engineering
- 4 respondents state "conjoint system" such as conjoint use of systems and conjoint administration
- 4 respondents state "developing materials" including coordination of course content, development of teaching materials, training materials and exercises.
- 2 respondents state "lecturer training" such as training and education for staff development

Figure 3. SAP teaching experience in years

ces
SAP teaching experience of the responding
years with a 2.24 standard deviation. 50 % of

submitted curriculum plan for the integration of SAP into the curriculum lacks the required detail or is overall too weak.

- 2 respondents state having "regular meetings" such as organizing interdisciplinary meetings
- 2 respondents state creating "special study program" like collaboration through student internships
- There are a few responses about organizing workshops for students, creating a collaborative unit with faculty and exchange of lecturers.

Yet again the practice of exchanging experiences and conjoint lectures appears (52 %).

The results of this section on collaboration seem to indicate that although many institutions are not currently collaborating with other universities, they are interested in doing so. Many respondents acknowledge the need for such collaborative activities but have not sufficiently engaged in them. While some have collaborated across faculties internally, they still believe that collaborating with other institutions seems to be of great benefit to them.

Inter/Intra collaboration between university facilities for teaching SAP

4.8 Public Perception

This section explored the success of the SAP initiative as measured by public perception. 285 respondents answered this section. The following is a repeat of the questions posed and their respective scales (see also Table 3).

Qn No.	Question	Scale
Q17	Increase in student demand?	5: substantially 1: not at all
Q18	Increase in employer interest?	5: substantially 1: not at all
Q19	Increase in employer demand for students with SAP knowledge	5: substantially 1: not at all
Q20	Reaction of students to SAP introduction	5: positive 1: negative
Q21	Reaction of industry to SAP introduction	5: positive 1: negative
Q22	Reaction of employers to SAP introduction	5: positive 1: negative

Table 5 Questions for impact on public perception of introducing SAP

SAP is starting to make a better appearance for college students

For question 17, there seems to be a slightly increasing student demand for SAP knowledge after it was introduced into the curriculum and the same is true regarding the increase in employer interest (Figure 11). Question 19 reports a higher rating. The lecturers found that there was an increase in employer demand for students with SAP knowledge; however, the highest ratings came regarding the student's reactions. The lecturers felt that there was a very positive reaction from the students after SAP was introduced into their curriculum. Finally the reactions from the industry and the employers (questions 21 and 22) to the introduction of SAP were perceived as generally quite positive.

4.9 SAP-related Subjects

In this last section of the survey, we captured details on the actual units. In total, 220 respondents answered this section. Overall, we collected details of 660 subjects which have references to SAP, of which 249 have been classified as under-graduate, 349 as post-graduate and 62 as others including professional training, vocational school, and job training. This implies that the focus tends to be on graduate students instead of under-graduate students.

SAP Move targeted towards graduate level

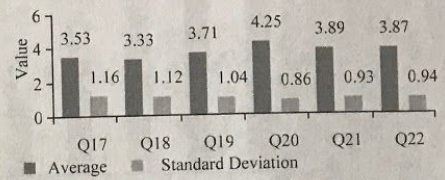

Figure 11. Section E ratings for impact on public perception

In order to evaluate the maturity of the offerings, we asked for each subject when it was first introduced into the curriculum (Figure 12).

The results show that approximately 80 % of all classes were first offered between 1999 and 2003. There was a steady increase in the introduction of SAP-related subjects between the years 1997 and 2000. This result is consistent with the option of universities and schools utilizing the services of a university competency center.

Comes back to discuss UCC vs universities

4.10 Details on enrolment and curriculum hours

The respondents were required to enter the number of students enrolled for each subject, its lecture, lab and tutorial hours in total for each semester.

Figure 13 shows the average, the range of values, and the standard deviation of all 660 subjects. The range indicates the highest value given. The lowest was 1 (students enrolled) or 0 (hours). The high deviation and range values seen here seem to indicate two possibilities:

1. The questions we posed to capture this data was understood differently by individual respondents. This could cause inaccuracy in the data for these questions.
2. Due to the diverse nature of this survey in terms of courses offered, the answers entered by individual lecturers may vary. For example, in specialized subjects, the enrolment and hours spent can be very different between an under-graduate's and graduate's curriculum.

Considering possibility two, we classified each average to the different subject categories to compare the distribution.

The trend here seems to be consistent with the majority number of subjects offered by graduate courses. However, the average number of hours cannot be analysed accurately because of the diverse nature of the answers (Figure 14).

4.11 SAP modules used

In this part of the section we presented a list of SAP modules to the respondents and asked for a rating of their usage based on how detailed they would utilize a SAP module. The rating was done on a five point Likert scale with one being "casual review" and five being "in-depth review".