The value of education in different countries
German alumni's point of view

40
30
20
10
0

Germany D
Great Britain GB
USA
France F
Australia A
Japan J

ranked 1st
ranked 2nd
ranked 3rd
ranked 4th
ranked 5th
ranked 6th

Learning about Alumni Networking

Results of a Survey on Graduate and Work in Southeast Asia

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Results of a Survey on Graduate and Work in Southeast Asia
Indonesia

The Alumni-Network activity which took place from 18th to 22nd September in Bogor, Indonesia has followed three essential objectives in accordance with the programmeme lines A, B, and C of the German Academic Exchange Service (DAAD) as the supporting institution.

Since 1999, the DAAD has financially supported German Universities to organise, establish and execute systematically alumni networks of the former graduates from German Universities coming from abroad. For this reason, the tropical centre of the University of Göttingen (CETSAF), the Institute for Socio-cultural Studies, University of Kassel – Witzenhausen (ISOS) and University of Marburg (IKE) have established a consortium to organise symposia – cum – workshops in the South-East Asian Region with their alumni.

The main objectives of these Symposia are

- To facilitate the exchange of ideas and scientific experience between scientists from the region and German scientists and to secure the long-term contacts between German universities and higher education institutions in the region;
- To establish a mutual alumni network in institutions of higher education in the region.

The establishment and the execution of the professional alumni network in the South-East Asian region was based upon the existing data base on the graduates from the Universities of Göttingen and Kassel – Witzenhausen as well as Marburg. This includes the up-dating the data and improvement of scientific exchange and communication between graduates and their German partners via organisation of professional seminars and symposia.

A corresponding follow-up meeting has taken place in autumn 2000 in Bogor. The title of the international symposium -cum-workshop was "Sustainable Deve-lopment in the Context of Globalisation and Locality, Challenges and Options for Networking in Southeast Asia".

During the symposium, questionnaires were distributed among the participants to be filled in to support databases and collect information about the career planning of the alumni. The results of the survey are demonstrated in this report.

Background

Concern has grown rapidly about graduate employment and work in European countries recently. At the same time, the number of surveys on graduates' employment and work has increased substantially. In the European Journal of Education (Vol. 35, No. 2, June 2000), a selected number of such surveys about different European countries have been published.

One of the main reasons for the increase of such surveys is the overall structural and functional changes that have taken place and are still taking place in universities.

These changes give rise to the assumption that the discrepancy between competences acquired in education and those required in "real life" has grown to a large extent. Kellermann & Sagmeister (162/2000) point out three possible origins for this discrepancy. First, the educational system might be so far removed from the workplace that educators are unable to anticipate the competences graduates will need for a productive life (under-qualification). Second, the

workplace might be organized in such a way that graduates' skills cannot be used efficiently (under-utilization) and finally the graduates might be overqualified according to the discrepancy itself, especially from the graduates' point of view.

Teichler (151/2000) assumes that the number of privileged and intellectually highly demanding positions has not grown over the last few decades in line with the expansion of higher education. He assumes further that the perceived threshold between a somewhat appropriate graduate job and underemployment or inappropriate employment certainly has changed as a consequence of the growing supply of graduates, and finally it seems obvious that employment in general – and more especially that of higher education-trained persons – has become more risky in recent years than "regular employment" for a graduate in the past.

In developing countries the problems of graduates' employment do not seem to be of crucial importance in comparison to other manifold problems of universities at present. However, a number of surveys in the 90s concerning the role of higher education in general, and the role of universities especially, assume that change in universities worldwide is necessary, if they are to survive (World Bank, 1994, 1994, World Conference on Higher Education, 1998, Gibbons, 1994, World Conference on Higher Education for all, 1990).

Finally, what seems to be much more important is that the number of studies on employment and work of graduates of European universities from abroad is scarce, and the question of the outcome of the education of foreigners is assumed only in very rough global and general statements.

For German universities it is furthermore assumed that the decreasing number of foreign students due to several reasons goes hand in hand with the lack of information about the transition of education.

This report focuses on these changes in close relation to graduates' employment and work in universities and tries to point out the importance of career planning and contacts of alumni to universities of the region.

Need for Change
The debate on necessary changes in universities generally, and in the southeast Asian region especially, points out the following aspects:

- Universities worldwide are facing crucial problems due to the new role that they have to play in the near future,
- the survival of universities depends very much on the readiness of universities to actually take future changes into consideration,
- internalisation and globalisation put the economies and science under pressure, require the implementation of necessary changes in the universities and ask for their positions and programmemes,
- universities are facing a severe financial crisis according to their efficiency, competition patterns and their co-operation with corresponding institutions in society,
- governmental support of universities probably will be replaced by self-management and operational autonomy in the near future,
- the change of paradigms in universities' teaching, research and administration has already started in many universities. For their quality assurance, universities need more efficiency, co-operation and competition.

German universities under state control have hitherto rarely involved themselves in organisational changes on their own accord. They have rather reacted the decision-making of their governments in the case of innovations. It has been possible or necessary to improve the curriculum, the teaching, the research and the administration in favour of students and graduates of their university, especially of their alumni from developing countries. In other words the return of information from the alumni to the university has been neglected in German universities for a long time and the question of the international competition in terms of transfer of knowledge and technology has been faded out until 1999.

Methodology of the survey

The symposium – cum – workshop in Indonesia was a convenient forum for taking the opportunity for updating of the database and at the same time to start a survey on alumni with special focus on the process of education and the transfer of the science and technology on the base of the alumni's higher education in Germany. The study used questionnaires to contact 70 alumni out of 86 who participated in the above-mentioned symposium in September 2000. The questionnaire was prepared to collect information about

- current private and office addresses of the alumni for the database,
- reasons for choosing Germany for higher education,
- the process of higher education and professional education in Germany,
- process of reintegration of the alumni in their society after education incl. their contacts to German families, their host university and higher education institutions in Germany,
- career planning of the alumni incl. their current position, their research, teaching and administrative activities and finally their involvement in industrial, managerial and societal positions,
- the evaluation of German education from the graduates' point of view in terms of applicability, missing curricula, further education etc.
- evaluation and effects of network as well as readiness for active participation in alumni network concerning the use of homepage, office, publications and newsletters

For further information, please see the attached questionnaire.
For a better understanding of the questions put, the questionnaire was translated into the Indonesian language for those participants with little or poor English language knowledge. The questionnaire was prepared with quantitative as well as qualitative questions. Both were analysed by using the SPSS programmeme.

The results of the questionnaire

The following figures demonstrate the general structure of the alumni according to sex, age, family status and the number of children. The Southeast Asian alumni of the universities of Göttingen, Kassel and Marburg mainly come from Indonesia, 4 from the Philippines, 1 from Malaysia and 1 from Vietnam. In this case it would be humble not to talk about the Southeast Asian alumni, but rather about Indonesian alumni.
It seems to be interesting that the alumni are 42 years old on average. The average of the age of male and female are similar (Fig. 1). The high age of the alumni is probably very close to the high number of years of education (s. below). This is also an indicator for the number of married alumni (about 96%) and the number of children (average of the number of children is 2.26 in all

cases and 2.68 in cases, excluding the families without children, which concerns 10 families (table 4)).

Table 1: Alumni's nationalities

Country	Frequency	Percent
Indonesia	64	91.4
Malaysia	1	1.4
Philippines	4	5.7
Vietnam	1	1.4
Total	70	100.0

Table 2: Sex

	Cases	%
Female	20	28.6
Male	50	71.4
Total	70	100.0

Fig. 1: Age of males and females

		Cases	%
Valid	0	10	14.3
	1	13	18.6
	2	17	24.3
	3	17	24.3
	4	8	11,4
	6	2	2.9
	7	2	2.9
	Total	69	98,6
Missing	System	1	1.4
Total		70	100.0

Table 4: Number of children

	Cases	%
Single	3	4.3
Married	67	95.7
Total	70	100.0

Table 3: Family status

Alumni's current positions

Among the 70 alumni, 58 have mentioned their position as a lecturer. One is president, one vice president, one head of a laboratory; the others are researchers, professors and scientists. The remaining 5 are employed outside the university. They are assistant manager, instructor, vice rector for planning and co-operation (tables 5 & 6).

Out of 70 cases 37 are PhD holders from the universities listed in the following table. 16 of them have graduated from the University of Göttingen. Most of the PhD holders are agronomists in different branches like plant production (15) incl. forestry (6), animal production (8), socio-economics (6), education (3) and irrigation (3).

Table 5: Exact job-title in English

		Cases	%
	Assistant manager	1	1.4
	Head of Laboratory	1	1.4
	Instructor	1	1.4
	Lecturer	58	82.8
	President	1	1.4
	Professor	1	1.4
	Researcher	2	2.9
	Scientist	1	1.4
	Staff of Board Director	1	1.4
	The Presenter of community forest data	1	1.4
	Vice President for Research, Development and Extension/ Professor	1	1.4
	Vice Rector for planning and cooperation	1	1.4
	Total	70	100.0

The following table demonstrates the title of the participants in their natural language. Most of the alumni (77.1%) are called "*Dosen*", which means Lecturer.

Table 6: Job-title in national language

	Cases	%
No answer	3	4.3
Ajun	1	1.4
Baoton dong vat	1	1.4
Dosen	54	77.1
Guro	1	1.4
Kepala lab.	1	1.4
Pangulo	1	1.4
Pembantu Rektor IV	1	1.4
Peneliti	1	1.4
Penyaji data hutan kemasyarakatan	1	1.4
Staf Direksi	1	1.4
Staf Edukatif	1	1.4
Staf pengajar	1	1.4
Staf Pengajar	2	2.9
Total	70	100.0

None of the alumni received his/her BSc. or BA. degree from a German university. However, 36 MSc holders (51.4%) graduated from Göttingen University. The following table shows the universities from which the participants have received their MSc. degrees (table 7).

Table 7: Degree/ Study "Master/ University "

	Cases	%
No MSc	9	12.6
Brawijaya	1	1.4
chiang Mai	1	1.4
DMMMSU	1	1.4
Gadjah Mada	3	4.3
Göttingen	36	51.4
IPB	3	4.3
ITC	2	2.9
Kochi University	1	1.4
Kyoto	1	1.4
Oklahoma State University	1	1.4
Padjadjaran	1	1.4
Saarbrücken	1	1.4
Shizuoka	1	1.4
Siliman University	1	1.4
SLC	1	1.4
University of Hannover	1	1.4
Univ. of Tsukuba	1	1.4
UNPAD	1	1.4
UPLB- The Philippines	1	1.4
Vrije University Brüssel	1	1.4
Xavier	1	1.4
Total	70	100.0

Göttingen plays not only a great role in terms of the number of graduates with a MSc degree, but also in terms of PhD graduates, as the table 8 demonstrates. This is due to the German education policy. For over two decades there has been a focus on postgraduate education as far as foreign students are concerned.

Table 8: Degree/ Study "Doctoral/ University "

	Cases	%
No PhD	33	47.1
Bonn	4	5.7
DMMMSU	2	2.9
FU Berlin	1	1.4
Giessen	4	5.7
Göttingen	16	22.9
Hamburg	1	1.4
University of Hohenheim	1	1.4
Humboldt Univ. Berlin	1	1.4
Kassel	2	2.9
Padjadjaran	1	1.4
Saarbrücken	1	1.4
San Carlos	1	1.4
Univ. of southern California	1	1.4
Univ. of Tsukuba	1	1.4
Total	70	100.0

Financial Support

The financial support given to the alumni for MSc and PhD degrees by different institutions is shown in the two following tables (table 9/table 10). In both situations the German Academic Exchange Service (DAAD) is the main supporting institution together with the German Agency for Technical Cooperation (GTZ). The latter is supporting a special Master degree programme for Indonesian citizens which has been carried out for 10 years at the University of Göttingen. In seven cases the participants of post-doctoral training courses have been financially supported by the German Foundation for Development (DSE) . The UNISTAFF courses have taken place at the Institution for Socio-cultural Studies (ISOS) at the University of Kassel (GhK) in Witzenhausen.

Table 9: Degree/ Study "Master/ Financial support "

	Frequency
0	16
ABOS	1
ADB- Loan -HEP	6
Colombo Plan	1
DAAD	5
DAAD/GTZ	7
Fulbright, USA	1
GTZ	7
GTZ-SFMP	1
Indonesian Government	1
Mombusho	4
NUFFIC	2
ÖSW	1
Perhutani	2
Private	4
Private company	1
SEARCA	1
TMPD	2
USAID	1
Total	70

Table 10: Degree/ Study "Doctoral/ Financial support "

		Frequency
Valid	1	
	0	33
	ADB	1
	DAAD	21
	DAAD/ GTZ	2
	DAAD/Worldbank	1
	DUE Batch II	1
	Indon. Government (URGE)	2
	Konrad Adenauer Stiftung (Foundation)	1
	Mombusho	1
	Private	4
	Scholarship, Xavier Uni.	1
	TMPD	1
	Total	70

Duration of education

A bachelor's degree in the home country has taken 4,2 years of education in average, the master's degree has taken 2.8 and the PhD 4.25 years in average as can be seen from the table 11.
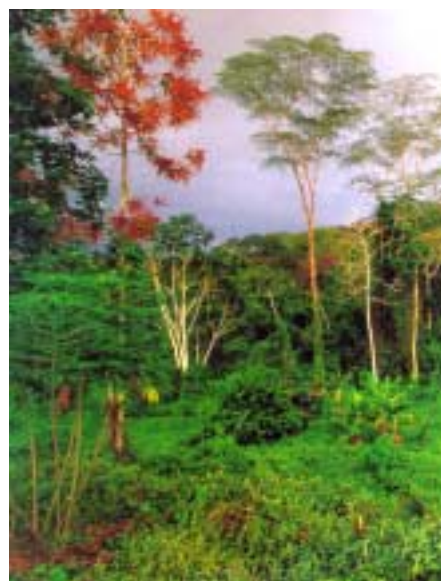
Table 11: Degree/ Study "Bachelor/Master/PhD Duration (Years) "

N	BSc 70	MSc 60	PhD 35
Average (years)	4.21	2.8	4.25
Median	4.50	3.0	4.00
St. diviation	2.12	1.7	2.26
Maximum	7	7	7
Minimum	3	1	2

The combined Southeast Asian and German higher education, which leads to a PhD degree takes 11.2 years on average. This is, in fact, a long time in international comparison. The master degree course in Göttingen (English courses) takes on average only 1.95 years, which seems to be quite efficient.

Theses in home country and abroad

The theses in the home country as well as abroad are listed in the appendix at the end of this report. This list should make the themes and the fields of interest of the alumni in their education quite clear. From this aspect the alumni network should provide the alumni with necessary scientific information via Internet, try to organize a connection between the alumni and German institutions of higher education and inform about the current meetings and conferences worldwide.

Motivation to choose Germany as the location for education

We could identify five main categories of motivations by alumni for choosing Germany for further education. These categories were:

a) **Scholarship**: In 11 cases the scholarship was the main reason for continuing education in Germany. This category is, however, an extrinsic motivation and cannot refer to any qualitative judgement on higher education in Germany. The scholarships came mainly from the DAAD.

b) **Technical aspects of higher education in Germany**: In 31 cases the alumni declare that Germany is internationally renowned for higher education. It has a very high international reputation in technical and educational aspects. The higher education system is highly developed. These are the reasons for choosing Germany for continuing education.

c) **Personal wish**: In 12 cases the personal wish to study in Germany has played a role. This category is mentioned without any further explanation. It is just a wish to study in Germany. The real background could not be identified.

d) **Cultural motivation**: In 9 cases the alumni mention the cultural issue as the motivation to continue with education in Germany. The alumni are very much interested in knowing more about German culture and the German way of life.

e) **Others**: There are other different motivations mentioned like obtaining knowledge or learning about forestry or about agriculture, which in fact do not specify the motivation for choosing Germany as the location for continuing higher education (7 cases).

From the above qualitative answers to the question of the motivation to choose Germany for continuing further education, it becomes clear that the technical aspects, opportunities for using university equipment and the high reputation of German education, especially in Indonesia are the most important reasons. The evaluation of the higher education in Germany by the alumni (s. below) makes this clearer.

Evaluation of the study time in Germany

The evaluation of the study time in Germany refers to the statements of the alumni in terms of technical equipment, appropriate and new knowledge offered in Germany, the cultural life, the scholarship and finally the accommodation. The labels were on an interval scale from very good=1 to very poor=5. The following profile demonstrates the evaluation from the alumni's point of view for 70 cases (Fig. 2):
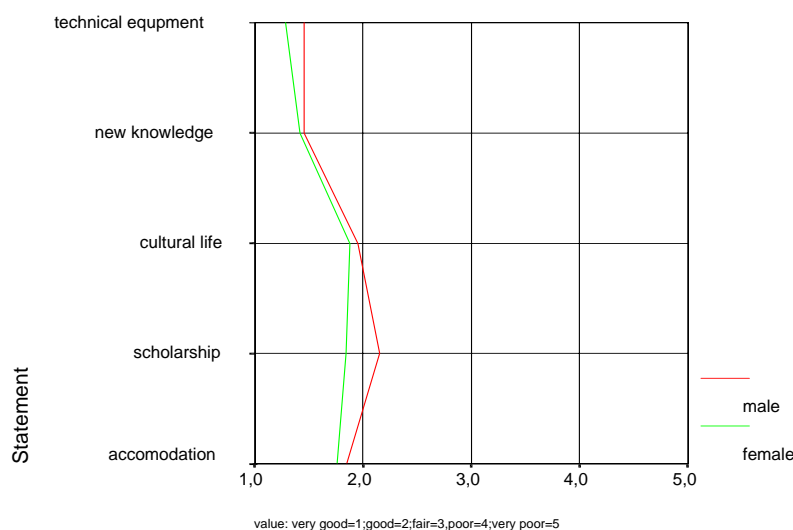

value: very good=1;good=2;fair=3,poor=4;very poor=5

Fig. 2: Evaluation of the study time in Germany

As it can be observed from the above profile, the values of the study time in Germany lie very high. Especially the women evaluate their study time in Germany very highly. The men evaluate the scholarship rather lower than the women. High values for technical equipment are to be observed from the profile.

Research shows that personal development is an important issue in higher education. Breaking down the issues of personal development into carry-through abilities, persuasion abilities, social abilities, emotional intelligence, scientific abilities, strong character, self-confidence, management abilities, dominance, rationality, efficiency and organisational abilities, we were very interested to know which of the items are rated as very important, important and less important in higher education in Germany. The alumni were supposed to rank the mentioned labels according to their importance beginning with 1 down 3. The results are given in table 12.

From the table below it is evident that the most important personal development indicator from the alumni's point of view is the scientific ability (71.4%). If the cases where it is ranked second are included, the scientific ability counts 91.4%. Only 3 persons give the scientific ability less importance and 3 do not rank it at all. The second important indicator is emotional intelligence (84.3) followed by carry-through ability (81.2%) and self-confidence.

At the same time, strong character, dominance, rationality, efficiency as well as persuasion und social abilities are mentioned as not ranked or less important in terms of personal development in higher education.

Table 12: Personal development

Personal development		Very important	Important	Less important	Not ranked	Total
Carry-through abilities	Abs.	36	19	5	10	70
	%	54.1	27.1	7.1	14.3	100.00
Persuasion abilities	Abs.	26	25	4	15	70
	%	37.1	35.7	5.7	21.4	100.00
Social abilities	Abs.	20	32	3	15	70
	%	28,6	45.7	4.3	21.4	100.00
Emotional intelligence	Abs.	35	24	1	10	70
	%	50.0	34.3	1.4	14.3	100.00
Scientific abilities	Abs.	50	14	3	3	70
	%	71.4	20.0	4.3	4.	100.00
Strong character	Abs.	23	25	5	17	70
	%	32.9	35.7	7.1	2.3	100.00
Self-confidence	Abs.	35	21	2	12	70
	%	50.0	30.0	2.9	7.1	100.00
Management abilities	Abs.	24	31	6	9	70
	%	34.3	44.3	8.6	12.8	100.00
Dominance	Abs.	9	19	25	17	70
	%	12.9	27.1	5.7	23.3	100.00
Rationality	Abs.	22	29	3	16	70
	%	31.4	41.4	4.3	22.8	100.00
Efficiency	Abs.	34	17	3	16	70
	%	48.6	24.3	4.3	22.9	100.00
Organizational abilities	Abs.	24	30	2	14	70
	%	34.3	42.9	2.9	20.0	100.00

Additional analyses of the evaluation of the study in Germany make the topic more transparent. We asked the alumni to evaluate their study in Germany in terms of personal development, preparation for career, applicability, interdisciplinary teamwork abilities, intercultural communication, knowledge of language, English as well as the German language, new knowledge, methodology, leadership and management, self-confidence (once more), self-initiative and, finally, presentation techniques. The results of this evaluation are given in the following

profile by aggregating the statements and averages on a scale from very important=1 to not important=5.

As it can be seen from the diagram, the alumni have rated the study in Germany very highly. The values lie between very important and important (between 1 and 1.8). Slight differences are recognized between men and women, where the women evaluate initiative, the obtaining new knowledge as well as leadership as being more important than the men. At the same time they rate the preparation for career, intercultural communication and the German language a little lower than the men. This is not surprising if the structure of the society in Southeast Asia being more or less "male-oriented" is taken into consideration. However, these differences are not strongly significant as fig. 3 shows.

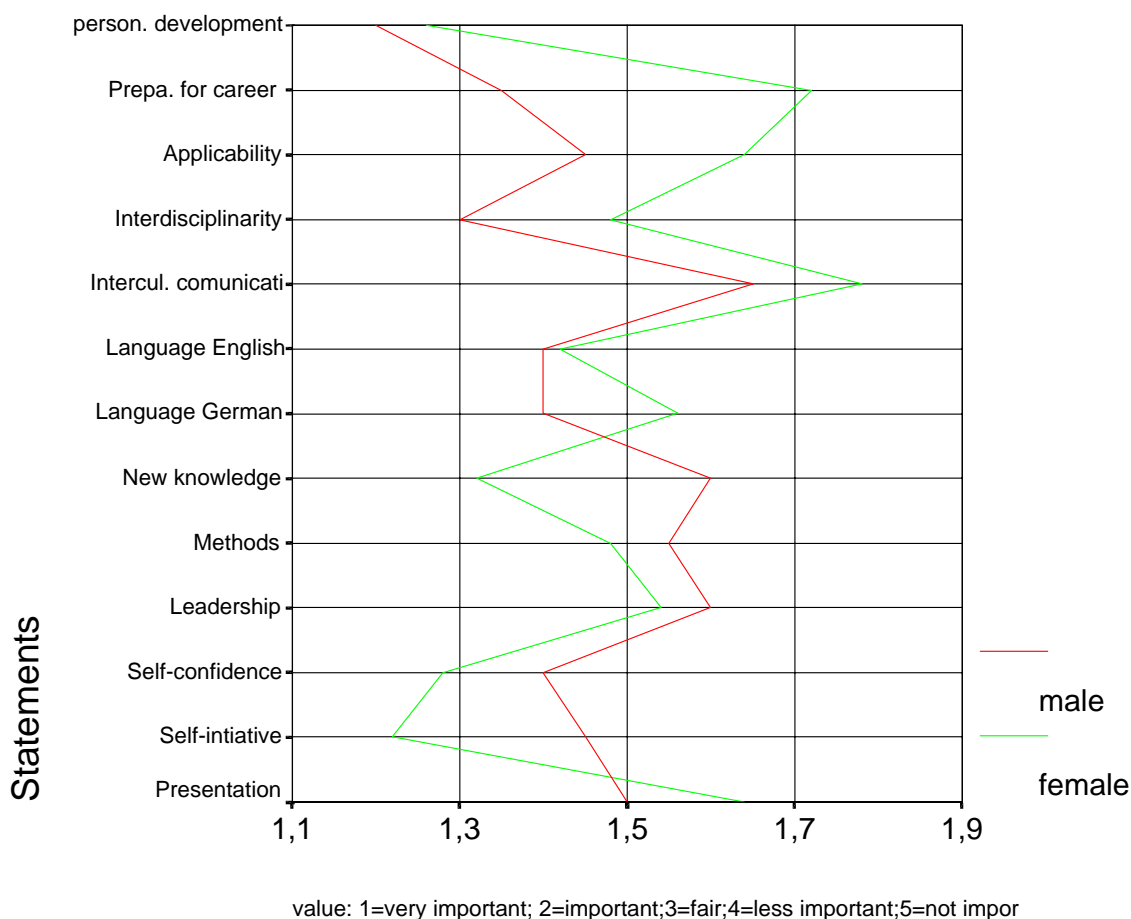value: 1=very important; 2=important;3=fair;4=less important;5=not impor

Fig 3: Profile concerning personal development and sex

Learning of cross-cultural communication skills does not seem to be very effective during the study at German universities. We asked the alumni to rank three of the suggested aspects, which they hold responsible for obtaining such skills. It was assumed that such skills are not taught at university and Germans are mainly dealing with themselves and not with others. In Germany one is left to him/herself thus expressing strong individualism, and higher education does not leave enough space for communication skills. Besides, Germans do not have enough time nor do the alumni find enough time to learn more communication skills.

The results show that in most of the cases the statement "in Germany one is left to oneself" is ranked as "most important" followed by the next statement "such skills are not taught at university", which is quite evident in the higher education system in Germany. Other statements are mentioned as "less important" or are not ranked at all.

The Chemistry of alumni contacts

During their study in Germany, 87.1 % of the alumni had contacts with German families and 12.9 % did not. The contacts to German families still exists for 64.3% (table 13).

Table 13: Does the contact still exist?

	Cases	%
Missing	7	10.0
Yes	45	64.3
No	18	25.7
Total	70	100.0

The contact with German families has broken down in 25 % of the cases. This depends very much upon the time of the alumni after having returned to their home country.
In a similar survey the author could identify the reintegration time of the alumni as 5 years. In the named survey, the alumni remained in contact with their German partners for at least five years after returning home.

In this specific case, many of the alumni returned home within last three years. This explains the high rate of existing contact with Germany. A cross-correlation between the contacts and the time after reintegration is demonstrated in fig. 4.
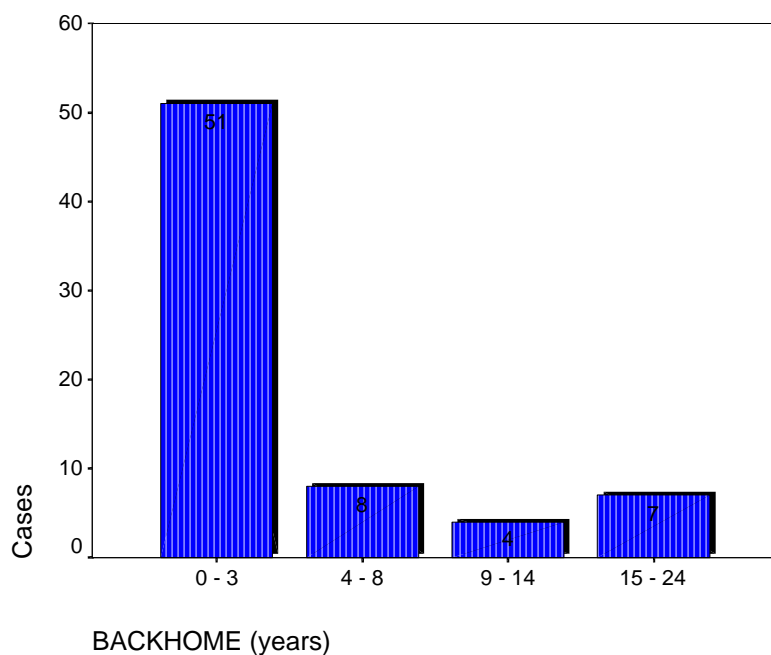

BACKHOME (years)

Fig. 4: Years after returning home

However, the results do not seem to underline the fact that the contacts to host universities or institutions may decrease in relation to time after returning home. This can be seen in the following tables 14 and 15(s. chi-square-test, table 15). Almost 50 % of the alumni who returned within the last seven years do not have further contacts to Germany afterwards. This result is crucial to the alumni networking with the objective to improve and maintain the contacts of alumni with Germany in order to update information, exchange scientific experience and strengthen the transfer of knowledge and technology and the applicability of the knowledge as well as career development.

*Table 14: BACKHOME * Does the contact still exist?*

Contact still existing

		No answer	Yes	No	Total
BACKHOME	Under 7 years	6	34	16	56
	8 to 15 years		6		6
	16 to 27 years	1	5	2	8
	Total	7	45	18	70

Table 15: Chi-Square-Tests

	Value	df	Asymptotic Significance
Chi-Square after Pearson	3.706	4	. 447
Likelihood-Quotient	5.667	4	. 225
Linear-with-linear	.203	1	. 653
Number of valid cases	70		

We asked about the intensity of contacts with German universities, with scholarship supporting institutions, with friends and relatives, with political and research institutions.
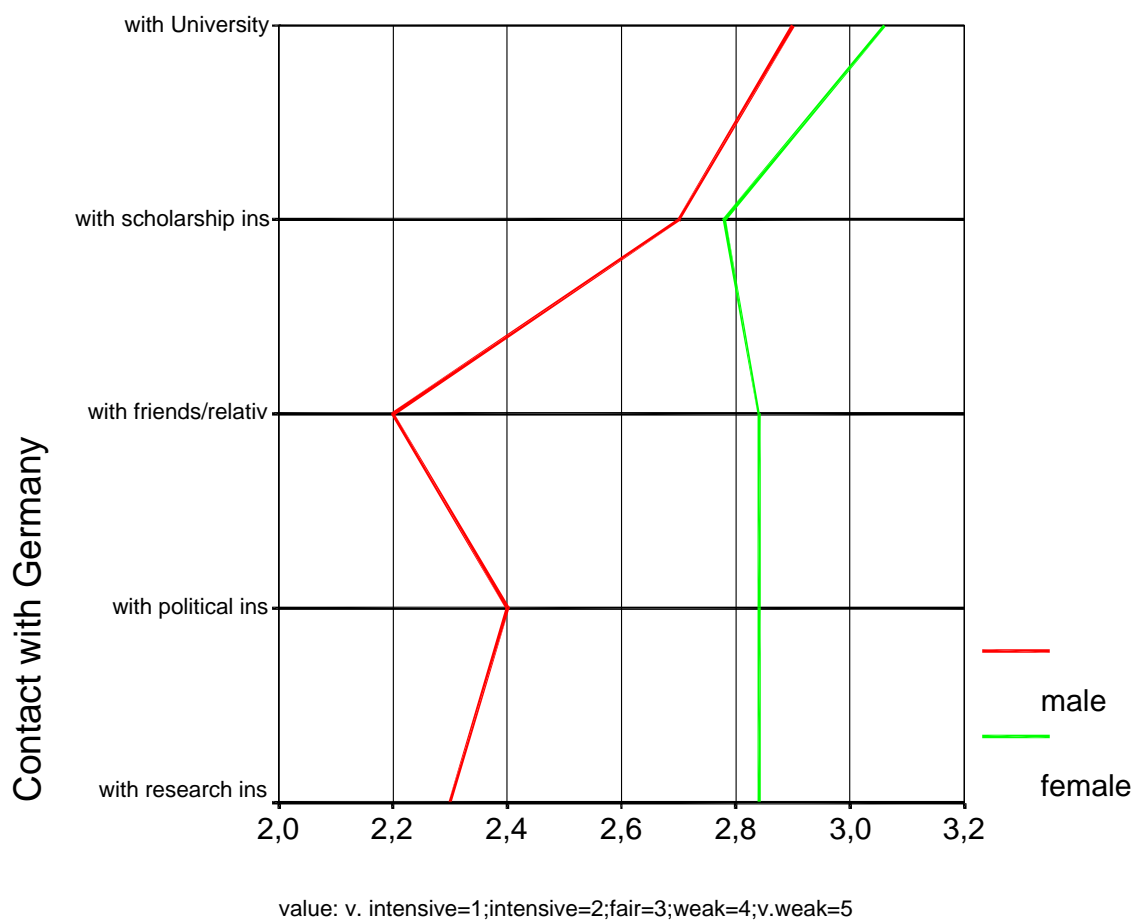

value: v. intensive=1;intensive=2;fair=3;weak=4;v.weak=5

Fig. 5: Alumni's contact in profile

Alumni's contacts with their host universities are almost non-existent. Especially female alumni have no contact to universities (fig. 5). Male alumni have contacted friends and relatives, research and political institutions in Germany. Again, this result indicates the importance of the alumni network programme of the universities in Germany (in this case the Universities of Göttingen, Kassel and Marburg and the DAAD). Although 50 of the 70 alumni express contact with Germany, the contact seems to be weak in most cases (table 16).

Table 16: Intensity of contacts with Germany

	Cases	%
Very intensive	2	2.9
Intensive	20	28.6
No contact	21	29.9
Weak	24	34.3
Very weak	3	4.3
Total	70	100.0

There are contacts with the German Embassy/Consulate in 13 cases, with the DAAD in 30 cases, with the Goethe-Institute or German cultural institutions in 9 cases, with a German Center in 4 cases, with German companies in the alumni's home countries in 6 cases, with German families in 17 cases, with colleagues and researchers in 25 cases, with development agencies in 13 cases and finally others in 11 cases.

We asked for contacts to countrymen, who studied in Germany. In this case the results are somehow encouraging. The dialogue between colleagues with the same background in terms of "study in Germany" seems to be strong (94.3%).

Table 17: Contacts with countrymen, who have studied in Germany

		Cases	%
Valid	Yes	66	94.3
	No	4	5.7
	Total	70	100.0

In 55.7% of the cases these contacts are either very intensive or intensive and in 30% they are occasional contacts. The reasons for the lack of contacts are quite different from the alumni's point of view. The own person is mentioned 7 times, the difficulty of contact 8 times and having little time for contacts 11 times. There is a strong wish to intensify the contact (90%), but in 12 cases the alumni does not know how, even though they know that maintaining contacts must be difficult as much as the efforts and expenses are concerned.

95% of the alumni are strongly interested in scientific exchange with Germany. 4% prefer a moderate exchange. Only in one case, there was no interest for scientific exchange.

Key qualifications
The personal development generally, and the scientific abilities especially, are rated by the alumni as "very important" in German higher education. In addition to this, it was of interest to us to know a little more about how the alumni judge their key qualifications in terms of ability to co-operate with colleagues, ability to work with supervisors, directors and students. How are the communication abilities, management and organizing abilities, computer skills and so on? The so-called key qualifications belong more or less to the side effects of higher education. They are part of the hidden curriculum and are rarely taught as formal lectures in a higher education system. However, universities in Germany recently offer a great deal of opportunities for obtaining such key qualifications. It depends very much on the individuals, how they make use of it.

	Average	
	Male	Female
Ability to co-operate with colleagues	1.70	1.66
Ability to work with directors/supervisors	1.75	1.72
Ability to work with students	1.60	1.68
Communication abilities	1.95	2.10
Management abilities	2.05	2.12
System thinking	1.65	1.80
Computer skills	2.30	2.40
Organizing abilities	2.30	2.14
Presentation and publication abilities	2.15	2.00
Action/initiative	1.85	1.80

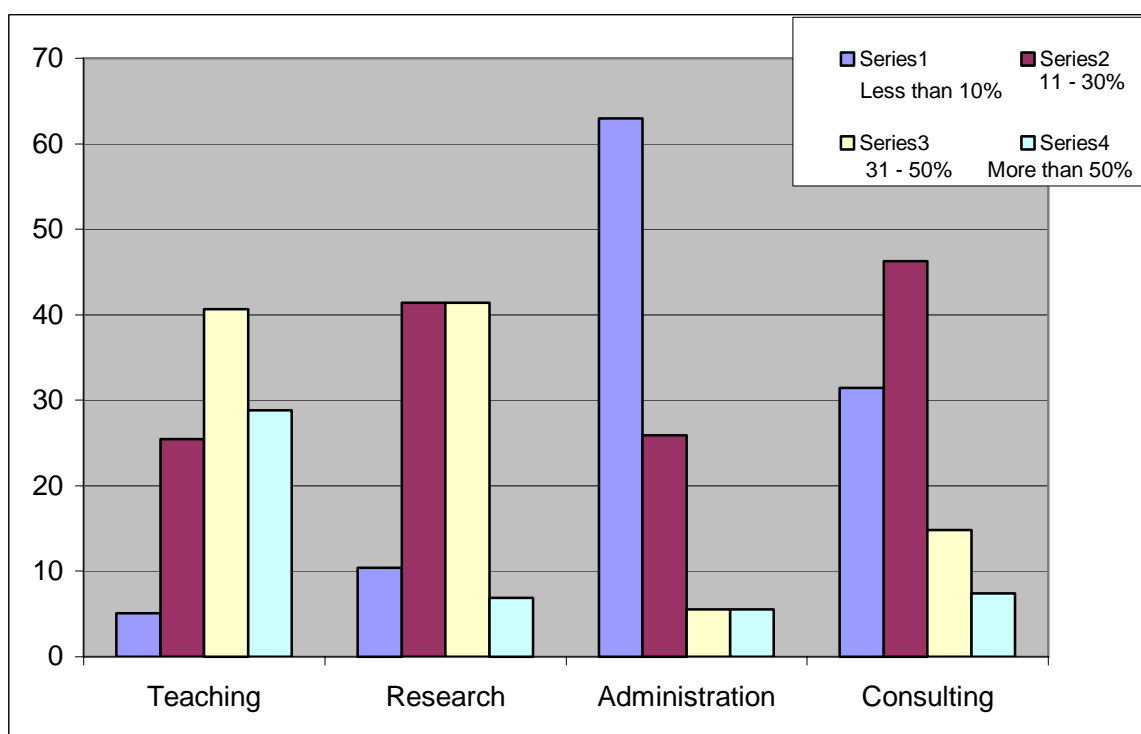## University teachers' profile

We asked the alumni about the actual allocation of their faculty time for an international comparison.

Our query with the alumni was on time spent on various activities, which we categorized in four groups: (i) teaching, (ii) research, (iii) administration and (iv) consulting. The results are shown in table 18.

Table 18: Time allocation of university teachers

Activities / Allocation	Teaching		Research		Admini-stration		Consulting	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Less than 10%	3	5.08	6	10.37	34	62.96	17	31.48
11 – 30%	15	25.42	24	41.37	14	25.92	25	46.29
31 – 50%	24	40.67	24	41.37	3	5.56	8	14.82
More than 50%	17	28.81	4	6.89	3	5.56	4	7.41
Total	59	100.0	58	100.0	54	100.0	54	100.0

Thus, about 69.5% of our respondents spend more than 30 percent of their time on teaching, while 48% spent more than 30 percent of their time on research. A surprising figure here is the amount of time spent on administration, which does not seem to confirm the international figures (s. Bryan & Burke, 1992). In their study participants were from different countries (Australia, Belgium, Czechoslovakia, Germany, India, the Netherlands, South Africa, Turkey, Zimbabwe…). From different disciplines in international meetings, they find out a relatively higher amount of time was spent on administration (less than 10%: 25%; 11-30%: 52.8%; 31-50%: 5.6%; more than 50%: 16.7%), while the figures for teaching and research are similar. This means that in the case of our alumni, the administrative activities are less than average in international comparison. In the case of consulting, the figures here confirm the international situation.

After having found out how this particular group of the scientific community spend their time, we then asked how they would *prefer* to spend their time, with the results shown in table 19. Two thirds (66.7%) of the university teachers from the region prefer to keep their actual time allocation to teaching. 22.8% of university teacher would like their teaching time to be reduced and 10% prefer to teach more than the actual teaching time. with research it is something different. About 54% wish to expand the time allocation of research. Only 16.95% declare that they would like to do less research. The remaining 30% like to keep the actual allocation of time for research.

Table 19: preferred time allocation

Activities / Allocation	Teaching		Research		Admini-stration		Consulting	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Less than actual time	13	22.81	10	16.95	26	47.27	7	12.96
More than actual time	6	10.52	32	54.23	4	7.27	11	20.37
Actual time	38	66.67	17	28.82	25	45.46	36	66.67
Total	57	100.0	59	100.0	55	100.0	54	100.0

A high number of respondents are satisfied with the time spent on teaching (66.7%), consulting (66.67%) and administration (45.46), which again confirm the international situation. In the case of administration, however only 47.27% wish less time spent on administrative activities (in international comparison 66.7%). For almost 13% of the respondents, the actual time for consulting is too much and 20% wish more consulting time than allocated.

The p.a. teaching deputy of the university teachers in form of lectures is demonstrated in table 20, which lies between 16 and 80% of the time allocation for teaching. However, we may add the teaching activities in form of seminars, exercises, practicals and excursions to these figures, which are figures with high standard deviations. Almost half of the respondents (only 27) have less than

10 hours of seminars, 33.3 percent between 11 and 20 hours and finally 14.85 percent more than 21 hours of seminar time per semester. Exercises are then by 18 teachers only. 28 respondents do spend time on practicals and 13 on excursions. The lectures seem to be the dominant teaching method in the Southeast Asian case.

Table 20: Allocation of teaching time: Lecture/ Amount (hours per semester)

Hours per Semester	Frequency	Percent	Weekly >App.<
20 - 50	14	42.43	2
51 - 100	15	45.45	5
101 - 150	3	9.09	8
151 - 200	1	3.03	11
Total	33	100.00	

37 of the 57 respondents do have problems with teaching and 20 do not. The fields where the problems lie, are shown in the table 21.

Table 21: Teaching problems

Teaching problems	Cases	Percent
Teaching materials and equipment	15	40.54
Literature and journals	13	35.14
Teaching methods	6	16.21
Large classes	3	8.11
Total	37	100.00

We asked the teaching respondents if there is a need for training in teaching. There is, in fact, a high need for teachers' training (78.57 percent). This question was put in the questionnaire to look for the areas, where improving teaching and learning can take place and what kinds of needs the teachers have.

Table 22: Do you see any need for training in teaching?

	Case	Percent
Yes	44	78.57
No	12	21.43
Total	56	100.00

"New teaching strategies", "effective teaching and learning management" and the "use of emerging technologies" are mentioned 28 times. Teaching's organization 9 times; curriculum planning 8 times; operating media and computer 6 times; evaluation 6 times.
In all these cases the respondents did not mention students' learning except in two cases: "How to make notes by students" and "how to motivate students for better learning".

Research Activities
Furthermore, we wanted to know about the contribution of the teaching staff to research activities at their universities.
Research activities in universities of the developing countries are restricted due to the lack of trained research personnel, scarce finances, lack of necessary equipments and finally administrative bias, constraints and bureaucratic systems. We asked the respondents whether they believe that there are heavy problems of research existing at their universities (fig.6) and which of the mentioned items mainly affect the research work table 23.
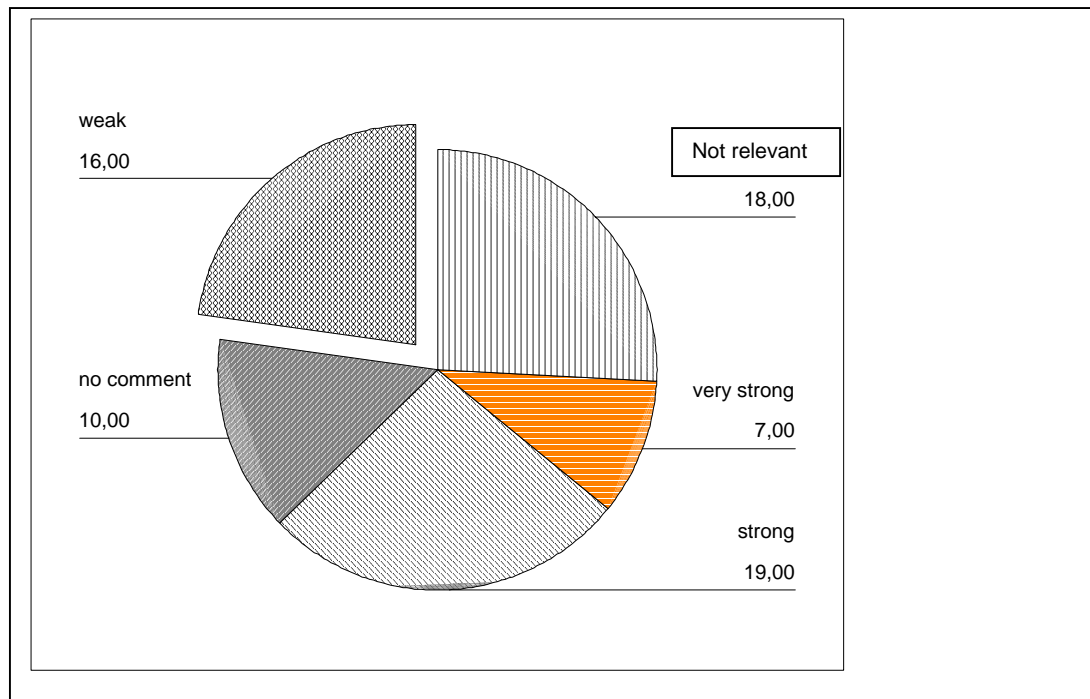
weak
16,00

Not relevant
18,00

very strong
7,00

no comment
10,00

strong
19,00

Fig 6:

Research Problems

Table 23: Which are the main problems of research in your case?

	Personnel		Finances		Equipment		Administration	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Yes	8	13.56	55	93.22	41	69.49	9	15.26
No	51	86.44	4	6.78	18	30.51	50	84.74
Total	59	100.00	59	100.00	59	100.00	59	100.00

The lack of finances seems to be the most important constraint to research activities of the staff members (table 23). Research shows however that funds for research are not available in the universities without qualitatively outstanding research proposals. Given financial resources do not necessarily lead to more research activities. The same applies to research equipment. Personnel and administrative issues do not play a great role in the case of Southeast Asian universities. We asked the respondents whether there is a need for improvement of research. The question focused on the elements of the research process, namely the preparation (i.e. proposal writing), the execution of research, the dissemination, the publication and the evaluation.

Table 24: In which parts of research do you believe to be a need for improvement?

	Preparation		Execution		Dissemination		Publication		Evaluation	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Yes	34	58.6	31	53.4	33	56.9	42	72.4	23	39.6
No	24	41.4	27	46.6	25	43.1	16	27.6	35	50.4
Total	58	100.0	58	100.0	58	100.0	58	100.0	58	100.0

The results of our questions are shown in table 24. The publication of research seems to be the most important need to the scientific community in this survey (72%), followed by proposal writing and the execution of research. Training courses in research management seem to be of high relevance to the respondents.
In 49 cases of the 57, the respondents stated a need for additional training in research.

Table 25: Do you need additional training in research?

	Frequency	Percent
Yes	49	85.96
No	8	14.04
Total	57	100.00

The need for additional research training was explored by a qualitative question. The results are listed as follows:

- How to disseminate the result of research, how to make such a result become an effective innovation for society   2x
- Methodological and statistical data analyses by using computer 18x
- How to create a good research proposal   12x
- How to evaluate research results
- Laboratory work and use of equipment
- Modeling in hydrology and water resources
- Planning and implementing research with an interdisciplinary approach
- Publication, execution, preparation   5x
- Research management and planning   5x
- Research partnership, research management and laboratory work in an excellent research center in Germany
- Statistical analysis (electronically), methods of integrated resources and community based approach
- The application of advanced technology in each branch of science
- To develop new technologies at the farmer's scale
- How to improve international research collaboration

As it can be seen from the above statements, methodological and statistical data analyses and proposal writing are the fields where the respondents wish to have training. The respondents' wishes for methodological training are in a few cases very specific. This could mean that the basic knowledge about methodology is existent. What is more or less needed is the exercise on research projects with very specific topics. In this case the alumni network can help to a large extent by transmitting specialists for very narrow methodological issues via Internet. In the case of proposal writing, the situation is rather different. There is a strong need for training on how to write proposals as well as the ability to analyze and manage the research policy and fund raising.

Administrative activities

About half of the alumni fulfill administrative functions at their university or faculty.

Table 26: Administrative activities

	Frequency	Percent
Yes	25	45.45
No	30	54.55
Total	55	100.00

These functions are quite diverse:
Executive secretary of center studies; Secretary of department of developmental psychology
As a head of department
Executive secretary of institute of education programme assessment and advisory
Head of laboratory   9x
Head of graduate study programme   8x
Head of research center for economic policy   2x
Komisi kemahassuran jurusan, pusat kajian
maymus peryele Ane-like and Peyelolaan D3
President
Sebogai kelua lab. Biosystematics
Secretary in tropical rain forest research center
Univ. Publication and Documentation
Vice Dean
Vice President

The number of the years in administrative responsibility correlates with the importance of the position.

Table 27: Years of administrative activities

Years	Frequency	Percent
1,00	5	20.0
3,00	5	20.0
4,00	6	24.0
5,00	2	8.0
7,00	2	8.0
11,00	2	8,0
13,00	2	8.0
20,00	1	4.0
Total	25	100.0

The administrative responsibility affects very strongly (in seven of the 37 cases) and strongly in 13 of the 37 cases the career planning of the alumni in terms of scientific activities (table 28). In this context, carrying out scientific activities means more allocation of time for research, teaching and students' advising (table 29). On the other hand administrative activity is important for career development, better positions at university and faculty decision-making and supports university management. The number of beneficiaries as well as the losers from administrative activities is almost identical with a slight advantage for these kinds of activities.

Table 28: Career planning affected by administrative activities

	Frequency	Percent
Very strong	7	18.9
Strong	13	35.2
No comment	5	13.5
Weak	10	27.1
Very weak	2	5.3
Total	37	100.0

Table 29: Student's supervising affected by administrative activities

	Frequency	Percent
Very strong	8	22.8
Strong	14	40.0
No comment	6	17.2
Weak	5	14.2
Very weak	2	5.8
Total	35	100.0

Supervising Students

The staff members' activities concerning general supervising of students are existent in 81.2% of the cases. We asked the respondents about the kind of supervising and found out that helping students in writing their theses is the most important supervising activity (78.6%), followed by students' lecturing and tutoring. Since many staff members are lecturers, the number of postgraduate theses and dissertations are correspondingly quite low. Besides, staff members do not supervise or advise students in their personal affairs (table 30).

Table 30: Supervising students

	Supervising Students		Students' Lecturing		Scientific Essay		Theses writing		Theses Postgraduate		Dissertation		Personal Affairs		Others	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Yes	50	81.2	42	72.4	36	51.4	55	78.6	28	40.0	16	22.9	24	34.3	11	15.7
No	8	18.8	16	27.6	22	31.4	3	4.3	30	42.9	42	58.6	34	48.6	44	62.9
Total	58	100.0	58	100.0	58	100.0	58	100.0	58	100.0	58	100.0	58	100.0	55	100.0

Employment and career as non-university staff

12 alumni of the 70 were not employed at university. This small number does not allow intensive analyses of the situation of alumni not employed at university. However, out of the 12 alumni, 3 are employed in research institutions, 2 in the private sector, one by cooperatives, one by an NGO, 2 have their own business and 3 are employed by the government. To have a rough idea about the importance of the position we asked them to point out the number of persons who are working under their responsibility.

Table 31: How many persons are working under your responsibility?

Number of persons	Frequency
2	1
5	5
7	1
10	2
15	1
30	1
38	1
Total	12

In the majority of the cases 5 to 10 persons are working under the responsibility of the alumni, which points out the importance of the responsibility. As it is shown in table 31 in individual cases up to 38 persons work under the responsibility of the respondents. To reach these positions, the alumni changed their positions according to the following table.

Table 32: How often have you changed position till now?

No. Of changes	Frequency
Zero	4
Once	2
Twice	3
Three times	2
Four times	1
Total	12

There is not a definite significance for the case that with the years after returning back home the frequency of changing employment increases. Especially with the alumni employed at university, the employment situation seems to be quite stable. The majority of the alumni did not have any problem finding a job after returning back home. Exceptions can be observed in a few cases as it is shown in table 33.

Table 33: Problems of finding jobs after returning home

		Frequency	Percent
	Immediately	61	87.1
	1 Year	1	1.4
	2 Years	3	4.3
	3 Years	2	2.9
	6 Years	1	1.4
	Total	68	97.1
Missing	System	2	2.9
Total		70	100.0

Shortcomings of the study in Germany

The German language seems to be the most important problem of the respondents during their education in Germany (46%). Many of them also claim a poor knowledge of the English language. They attribute this shortcoming to the lack of time for learning the languages efficiently. Many alumni members (25%) additionally claim missing exercises in teaching during their studies. Assistants and researchers, especially from abroad, are rarely given the opportunity to work with students in German universities. About 10% have no knowledge of the theories behind their education. 10% mention the little time of the advisors for an efficient supervision. Other items are mentioned in 9% of the answers.

Accreditation

The Southeast Asian alumni did not have any problem with the accreditation of their degrees from German universities after returning back home. Only in three cases did the formal legalization by the Department of Higher Education take a lot of time.

Table 34: Problems getting German degree certificate accepted

		Cases	%
valid	0	7	10.0
	No	60	85.7
	Yes	3	4.3
	Total	70	100.0

The number of those who had problems in readjusting to life in their home country after returning is higher. 15 respondents did have such problems like "adapting some German ways which are not well understood by my fellow people"; "about living conditions" and other specific economical and typical reintegration and readjustment problems like "budget planning", "keeping income level", "income generating", "keeping the living standard in home country" and "very low salary". Some did have professional readjustment problems due to the lack of equipment: "especially shortcomings in educational facilities such as a computer".

Table 35: Problems of readjusting to life in home country

		Cases	%
valid	0	7	10.0
	No	48	68.6
	Yes	15	21.4
	Total	70	100.0

Other items were mentioned in relation with general and well known problems of professional reintegration which are listed below without further comments:

- Communication/ team work with alumni from other universities
- The rhythm of life is completely different from Germany
- After long time of study (2+3.5 years) I had to adjust myself to the research topics and other scientists who continued doing research
- Especially in teaching and research
- I had to improve everything by myself
- I should try to find a way to transfer my knowledge in accordance with our company's programme

- One starts to think better
- There was *no* concern from former University
- We have not enough facilities to develop plant bacteriology
- Working system was totally different

Value of higher education in selected countries

We were very interested to know about the attitude of our alumni to the value of higher education in some selected countries relevant for the Southeast Asian situation. It was clear to us that the target group would rank their host country's universities at a higher level. However, it was interesting to know about the ranking of the universities in different countries, which does not mean an objective value according to objective factors but according to the existing feeling of our alumni. The question was:

"On the following scale, a rough value of higher education (+) to (+++) is stated. Please enter from your point of view the value of higher education for Germany using the symbol D/France F/USA/Great Britain GB/Japan J and Australia A."

However, comparing theses results with results from a similar survey in Egypt-Arab-Region shows that studying in a host university does not necessarily lead to a definitely better ranking as the tables below show:
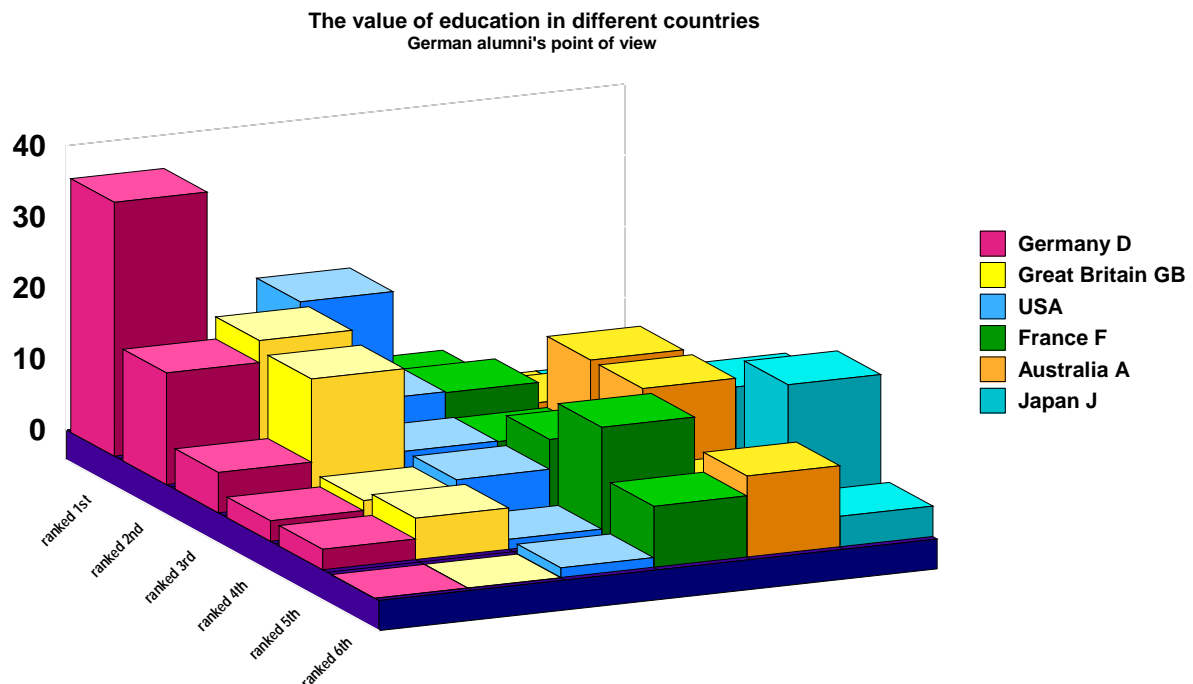

The value of education in different countries
German alumni's point of view

Fig. 7: Ranking education in selected countries

The results of this question are demonstrated in fig. 7. As expected the German higher education is ranked the highest. A weighted ranking is as follows:

Country	weighted ranking
Germany D	330
Great Britain GB	240
USA	201
France	170
Australia	169
Japan	151

Country	weighted ranking Southeast Asia	weighted ranking Egypt-Arab-Region
Germany D	330	175
Great Britain GB	240	139
USA	201	223
France	170	99
Australia	169	---
Japan	151	---
Russia	---	47

Memberships

About half of the alumni are members of some alumni network. These are alumni networks with a different status and generally with more or less outstanding activities. What counts more is that these alumni networks are not coordinated for a synergetic effect. As it is shown in the table below, 6 are members of "Alumni-IPB", 6 are members of SEAG (which was not officially established at the time of interview),

Table 36 :Member of any Alumni-network

		Cases	%
Valid	0	5	7.1
	No	33	47.1
	Yes	32	45.7
	Total	70	100.0

10 respondents are members of "German Alumni Association" (Indonesian: *PERSATUAN ALUMNI JERMAN PAJ*), the others are members of DAAD-Alumni, Carl-Duisberg Gesellschaft.

Table 37: How active is this alumni-network?

	Cases	%
Very active	3	8.3
Active	18	50.0
No comment	6	16.6
Less active	6	16.6
Not active	3	8.3
Total	36	100.0

Visit to Germany

We could not make any comment on the alumni's visits to Germany after returning home because the question was not put in a clear way. We just asked "When did you last visit Germany?" without mentioning the visit to Germany after finishing education and after returning home. We could however see that there were visits to Germany from 1975 until 1996 in 18 cases of the 70, which does not seem to be very often. It is not easy for Indonesian alumni to visit Germany very often because of the high travel costs. However, 37% of alumni participated in one or the other international or interregional conference last year.

Table 38: Participation in international/ interregional conferences last year

		Case	%
Valid	0	6	8.6
	Yes	26	37.1
	No	38	54.3

	Total	70	100.0

Establishment and maintenance of Alumni Network

The attitude of the alumni towards the establishment of an alumni network was asked for a scale from very positive to very negative. There are 65 positive feedbacks to this activity. 53 found the idea very positive. Since 48.6% of the alumni have access to Internet in their offices, 11.5 % at their homes and 21.5% in their homes as well as in their offices, the situation in Southeast Asia in terms of communication seems to be an easy one.

Table 39: What is your oppinion of the International Alumni-network?

		Cases	%
Valid	0	3	4.3
	Very positive	53	75.7
	Positive	12	17.1
	No comment	2	2.9
	Total	70	100.0

Information on the Internet

We asked the respondents to identify the issues which they would like to be put on the Internet for the special use of the alumni. The wishes were of course quite diverse. We have tried to classify the wishes into the categories shown in table 40.

In many cases, especially in the case of research and publications wishes were mentioned several times. However, as we can see from the table below the wish to get more information about research activities and more information about the networking is very strong. This issue makes the responsible bodies for the organization of the homepage to look for relevant information in the given areas.

Table 40: The field of interest for information to be put on the Internet

Scientific Activities			Alumni Network SEAG	
Research	**Publications**	**Studies**	**Structure**	**Functions**
Research activity; Research collaboration; Research done by members; Research field; Research note or abstracts of publications; Research programme; Research project Planning research; Results not only from Indonesia but also from abroad; On-going research of each member; Research result; Research cooperation; Current research topic; Research breakthroughs Research development and it's problem; Research information; Research opportunity; Research programmesand findings; Research collaboration; research and researcher; New research; Planning of research programme support by German agencies in local areas; Opportunity to find a funding research; Funding of research and other activities; Latest research development Possibility in joint- research ;	Publication / Internet and Journal Publication and Journal Publication of research Publication of research programme; All scientific publications Papers in local journals; Papers in international journals; Publishing manuscripts; Publishing handouts	Information study; Study; Study in Germany (how to enter, get scholarships Higher education / information, etc.);Higher education cooperation; Higher Education (change, staff development); Exchange results of research activity; Exchange scientific experience; Higher education / information; Higher education cooperation; Scholarship for PhD; Teaching and Learning; Staff development; Ecological issues; Forestry; Horticulture; Hydrophory; Plant production; Planning technology; Agriculture in general; Scholarship; Biotechnology; Conference and short course's time schedule; Curriculum; Organizational Change;	Knowledge of alumni; SEAG activities and information; Alumni address (home & office); Any information benefited to increase the capability of Alumni; Current Networking and Linkages; DAAD programme; Data Alumni; Programmes, Projects, Activities; Networking; Alumni information; Name, specification, contact address; Alumni status; Alumni regulations; Alumni structure; List of members;	Alumni network events, including conferences, re-union; Alumni Status/ accomplishments etc.; Database of alumni (including their expertise); Information about symposium, seminars, etc.; Information about the activities/ programme; International seminar; Networking priority; Success stories of SEAG alumni; GER graduates; Activities of members; Alumni networking; Alumni-linkages among universities in Indonesia; The current and future activities of SEAG; International conference; Information of new technology; Information training; Progress of alumni in their home countries; Plans of SEAG alumni; Members' activities; New advancement in science and technology and its relation with "opportunity" for the alumni;

We have classified the following aspects as "others" which referee to more or less general information to be put on Internet.

Keaklian dan kasil penelitiannya
Maril-hasil penelitian reslimi
Update of activities
Agenda/ Programmes
Consultancies of the German dev. project in certain countries
Current issues
Plan of activities
Regiatan penelitian, ekstensi, kagyaras
Academic activities/ accomplishments/
Advance technology in each recent activity
Development news of each country
Extension of technologies
General/ Popular issues
Literature revues
Project collaboration (other than research)
Something about Germany

Conclusions

Alumni Networking becomes an important issue in the era of expanding communication and necessary changes that take place in different sectors of societies worldwide. Universities are not an exception as far as structural and functional necessary changes are concerned. One of these changes concerning universities is certainly to pay more attention to graduates' employment and work in general and to graduates' employment and work from foreign countries in future. Especially in Germany, this field of investigation has been neglected for many years. policy makers and university manager need information for efficient planning in higher education.

Since 1999, the German Academic Exchange Service (DAAD) has financially supported German Universities to organize, establish and execute systematically alumni networks of the former graduates from German Universities coming from abroad.

Studies like this are planned to collect information about the alumni from German universities not only to enable scientific exchange, but also to evaluate the effects of German higher education system with respect to efficiency and outcome of German study and the impact of responsibility of graduates for their institutions and for their society. Furthermore, this study is planned to identify the areas where the alumni need support from German universities and German institutions for improving their position and career planning.

The results of this study are to be summarized as below:

- The Southeast Asian alumni of German Universities rank the German study very highly.
- The Southeast Asian alumni rate highly their qualifications. They believe to be competitive, efficient, self-confident and to be provided with scientific, organizational and managerial abilities.
- Alumni's contacts with Germany, especially with their host universities are almost non-existent. This means that the DAAD as well as the universities in Germany and in this special case Universities of Göttingen, Marburg and Kassel have started an efficient programme to move towards changing the contact with their alumni.
- Teachers' profile in terms of teaching, learning, research, administration and consulting are similar to international average with more or less slice differences in research time allocation, which seems to be satisfactory in case of Southeast Asian region. However there is a need for training staff in teaching and research management.

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Appendix

Title or subject of "Master-thesis"

A Comparison of ground flora diversity between forest and plantations in Doi Suthep-pui National Park

AC chicken production

Adolescent´s Mokal development

An Evaluation of the Training Program at the social Lab. of the DMMMSU

Analysis of irrigant deu´t using farmer participations

Bond strength and durability plywood from tropical wood

Cognitive psychology and mental development

Customary land in Tabang, traditional management and peoples attitude towards change and government forest policies.

Development of DSS for farm group work planning

Ecotourism in Indonesia: the potential of national parks

Effect of amino acid for Cactus tissue

Effect of essential oil of spices as feed addtive on the performance data and carcass characteristics n pig nutrition

Effect of motillage and conventional on growth and yield of two maize hybrids on negosol soil

Effect of sawing lab-lab purpureus under a maize crop on quality of maize and lab- lab leaves for goat feeding

Effects of putak (Coypha gebanga) stalk substitution for maize in broiler rations on nutrient intake and growth performance of broiler chicks

Effects Sauropus androgynus (SA) on feed Digestibility in Rabbit

Estimation of in vivo digestibility by chemical and in vitro digestibility technique of some Albanian feedstuff

Farm income and financing in rural Indonesia

Forest cost control in logging

Forest harvesting system in the tropic

Forest mensuration/ planning

Genetic Diversity of maize gumplasm from East Sulavesi

Growth Pattern of Dipterocarps

Habitat utilization of Javan gibbon (Hymoloch) in Ulug/ X. NP

Importance, profitability and sustainability of cattle fattening forms in west Timor, Indon.

Inter- and intraspecific crosses for increase phytophthora resistant on red pepper

Kubla Khan and the Romantic Dilemma

Landsat- TM aplication study to monitor deforestation by NDVI in southern part of Seram Island

Marketing system of agricultural Products with special reference to vegetables

Measurement of physical and chemical characteristics of yam Bean Tuber (phacyrhisus ries.ex.Dc)

Pressure pulping and bleaching form giscus with acetosolv process

Production analysis of beef processing in Samu Business Enterprises

Production and marketing of sandalwood in Indonesia

S2/ Effects of inoculum placement and soil moisture on yield of

Somatic embryogenesis as a step towards gene transfer

Some observation of BEEKEEPING of the giant Houpy trees on Belitung

Spices preservation using microwave and ionizing radiation

Street construction

Study of genetic variation in Tectona grandis Lf.

Study on rattan marketing in east Kalimantan

Supplementation of concentrate in rice-straw- molases based diet on milk production

The effect of IAA and IBA on rooting and growth of Bulian (Eusxxxxx) cutting

The effect of polyetthilen glycol (PEG) on the nutrive value Leucaena linocephala leaves in rabbits

The genetic variability of half-sib progenies of Teak

The impact of human resource development and system use on performance

The influence of two types of rooting and different reason on the productivity of unsexed groiler

The role of Ahrela microphylla on ammonia volatilization in the wetland fertilized with area

The role of Azolla micorphylla on the ammonia volatilization in wet land

The role of Inpres to reduce regional income disparity

The role of undergrowth on plantation

The use of UREA & ZA fertilizers on potatoes originated from seed

Training Needs of Farmers, Women & Youth in La Union, Philippines

Watershed management

PhD-dissertation

A Comprehensive Evaluation of the La Union Technoquides

Aggressive behaviors

Agricultural linkages to backward and forward enterprises in south Kalimantan

Application of microwave energy to reduce microbial content of spice

Characterization of variable surface glycoprotein of T. Congolena using monoclonal antibodies

Der Einfluß von Pharmaka auf die Atembewegung der Froschlurchen

Der Einfluß von Pharmaka auf die Atmung von Froschlurchen

Development of xxx

Effect endogenous vam von Eupatorium Odoratum on bean growth

Effects of extracts from Ginger and Zedoary as feeding deterred and growth retardant on Diamondback Moth

Effects of SA leaves on the biological activities: Milk Production and possible side effects

Einfluß der Arg-Bedürftigkeit auf die circadiarien Rhythmik der Mutanten der Grünalgen (chlamydomonas reinhardii)

Floristic composition and biomass of follow vegetation in agriculture fields of SE Sulavesi, Indonesia

Forest work activities

In progress (Adoption of impoved tumpangsari practice on central Jawa Indonesia : Effects on income generation , food production and deforestation

Integrated and ecological planning for Ecotourism development in Draya- still draft-

Livelihood strategies and socio-economic changes in rural Indonesia

Modeling water use efficiency

Optimization of farm work planning by using simulation and multicriteria decision making techniques

Proficiency and Training Needs of Extension Personnel of State Colleges and Univ., in Region I, Philippines

Role Perceptions and Expectations: the Dept. Ch

S3∕ Bedeutung v. Mikorhiza und Kalkung für die Aufnahme

Sekundäre Konstruktion in der Inzucht der Maus

Soil erodibility of different geological formation

Somatic embryo genesis and transformation by larix decidua

Study on physiological of resistance

The Biomass production under pesticide and hebicide influene for energy and earn purpose

The effect of CCC on herene levels of laying hens

The effectiveness of different coupling reagent for Conjugation of protein of Influenza virus, as measured by indirect Haemagglutination

The planning of skid trails in the tropic

The socio-cultural dimension of people's participation in Community-based development: The case of the Philippines

Using of essential oil in feed on milk production

Water use efficiency-operation model

Wirkung von vesikulär arvuskulär Inokulierung auf das Wachstum von Reis und Nigersaat unter verschiedenen Wasserregionen

Wood properties of Medang Tanduk from East Kalimantan

Zuwachsreakionen von Eucalyptus deglupta nach Erstdurchforstung