A Peer Group Support Network For An International Masters Programme

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Abstract

In 2001 Högskolan Dalarna launched a masters programme in computer science. This programme has attracted a large number of applications from international students. This has yielded many exciting opportunities, but also given rise to some problems, both practical and academic. A key element of the success in solving some of these problems has been to make the programme highly modular in structure, allowing two intakes per year. This has been the key to developing a peer group support system that is much appreciated by the students.

Keywords

Peer support, international students, independent semesters, staggered intake

Background

Högskolan Dalarna is a medium-sized regional university college situated in mid-Sweden. In 2000 an international masters programme in computer engineering was launched. This programme is run in cooperation with a number of other European universities and polytechnics through a network known as INHEE. Högskolan Dalarna acts as the main accrediting body for the programme; not all the partners have the right to award a degree at the master level.

The programme was marketed widely and we received a large number of applications from outside of Europe, as well as home and European students (mainly from universities in the INHEE network). Countries in the Indian sub-continent yielded especially many applications, although there were also many applications from other areas of the world such as China and northern Africa. This international dimension can be partly explained by the fact that, at present, Swedish universities are forbidden by law to charge tuition fees. This situation is likely to change in the next few years, but at the time of writing no legislation has yet been presented.

Thus the student body on the programme is extremely diverse, both culturally and academically. Although nearly all of the students can be described as hard working and with a good level of ability, their backgrounds vary a great deal. In many cases the teaching and learning methods used were somewhat different from the expectations of the students and their knowledge of different subject areas did not necessarily match our expectations. The informality of Swedish academic society also causes some difficulties – a Swedish professor expects to be addressed by his or her first name, not "Sir" or "Professor".

An additional problem of a practical nature was caused by the sudden influx of students from abroad. Most Swedish students rent unfurnished flats and the vast majority of the student accommodation is of this type. Yet it is clearly impractical to expect foreign students to bring furniture with them!
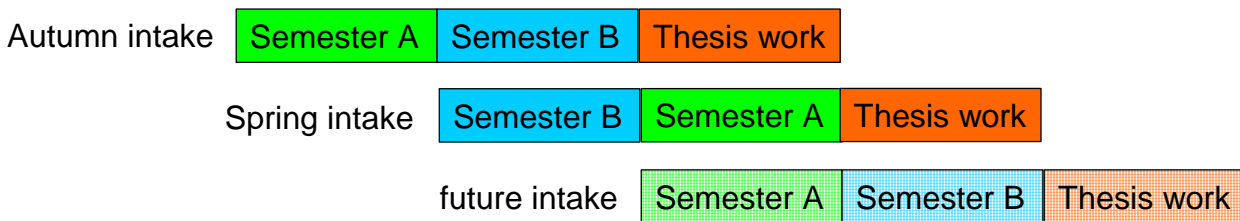
Structure of the Programme

The flexible structure of the programme is a key element in alleviating the problems identified above. It also enables a much more dynamic cooperation with our partners within the INHEE network. The programme is designed as a three semester (1½ year) programme. The first two semesters are taught semesters and the third semester is a project semester during which the student writes a masters thesis. So far this does not sound like a particularly unusual structure, but a key element that makes the programme flexible is that the two taught semesters are independent. This yields several benefits:

- Students can study one semester at Högskolan Dalarna and the other two semesters at one of our INHEE partners (who also deliver similar independent semesters).

- Other exchange students find it easy to come to Högskolan Dalarna for a single semester, even if they arrive part-way through the academic year.

- The programme can have two entries a year – a *staggered intake*. As will be seen this is a crucial element in the building up of an effective peer support network.

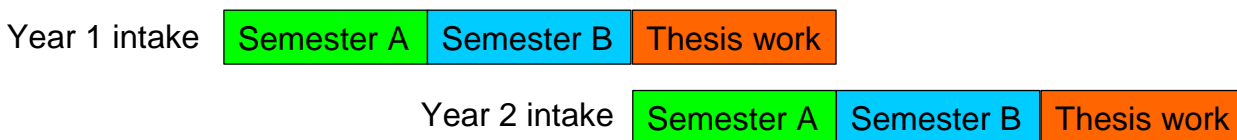- Workload is more evenly distributed through the year with better continuity.

Students who study the complete programme at Högskolan Dalarna thus follow one of two tracks, depending on which entry they enter the programme at (figure 1).

Autumn intake	Semester A	Semester B	Thesis work		
Spring intake		Semester B	Semester A	Thesis work	
future intake			Semester A	Semester B	Thesis work

Figure 1: Structure of the programme

From a peer support point of view, the key thing to note is that once the programme is up and running, each class contains a mixture of newly arrived students (on their first semester) and students who have already studied at Högskolan Dalarna for a semester. This gives a unique opportunity for peer group support within the classes – *those giving the support are studying directly alongside those receiving the support*. This can be contrasted with more traditional peer group support, which is usually arranged across the boundaries from one year to the next; i.e. second or third year students giving support to first-year students.

There is no real difference in financial terms from structuring a programme in this way. Each intake is half the size of a regular intake, so the total number of students in each class is the same. There is however, a major practical advantage, given that the length of the programme is not a complete number of study years. A conventional arrangement with one intake a year would give the following structure:

| Year 1 intake | Semester A | Semester B | Thesis work | | |
| Year 2 intake | | | Semester A | Semester B | Thesis work |

Figure 2: Conventional structure

It can be seen that the load on teaching staff for the taught courses is identical. However, the thesis works are now all concentrated to a single semester in the autumn. This is undesirable, as it puts a very heavy load on the staff at precisely the worst possible time – when the new students have just arrived. This unbalanced load puts extra pressure on staff and means that other important tasks such as supervising PhD students tend to be down-prioritised. Having the thesis works spread out through the year has other advantages. For ongoing research projects it is possible to "hand-over" a research topic from one student to the next. It is also easier to arrange cooperation with industrial partners if there is some continuity of activities.

Peer Support Aspects

Peer group support has, since the 1960's, been used extensively as a cost-effective way of improving learning outcomes in higher education. (Giddan and Austin 1982) give an overview of various peer support methods which have been experimented with. The term peer support is a rather general umbrella which includes both academic support and other kinds of help of a more pastoral and practical nature. Learning outcomes are often seen as primary, partly because they are easier to measure and partly because poor

academic performance, particularly a sudden unexplained fall in grades, is often a key indicator of a student having other problems.

Most of the peer support systems reported in the literature concern rather formally organised schemes (Barman and Benson1981). The emphasis is very much on training the students who are to provide the support and giving them a structured framework to work within. Careful selection of the students who will provide the peer support is seen as important. An extract from (Devlin-Scherer 1985) makes interesting reading:

> Peer advising to supplement faculty efforts was initiated in 1981 by students in the School of Business at Ithaca College. In order to increase personalized assistance, a group of students was selected and trained in the School of business procedures, basic counselling and college services. Peer adviser must meet a grade point average standard and submit an application with two faculty recommendations. A team of peer advisers and a faculty adviser review the applications, and final applicants undergo interviews…..

Clearly it was not a simple matter to become a peer advisor, and the system described is formalised in the extreme. It is also self-evident that international students have rather special support needs. On the one hand these students tend to be self-sufficient, adventurous and academically talented. On the other hand they face more problems such as cultural and language differences, distance from family, obstacles of a practical nature such as accommodation and are expected to "fit in" in a short space of time. In short, studying abroad is a high risk venture; if everything goes right it can be a wonderful, fulfilling experience. If something goes badly wrong it can be a catastrophe, not least because expectations were so high to begin with.

However, despite what we say above, international students do not have any very *specific* difficulties. It is not necessarily easy to train people to help this particular group of students. By contrast, a student with a learning disability has easily identifiable difficulties and it make sense to train selected peers to support such a student (Orzek 1994). Similarly a directed programme of support can be developed to support minority groups (Miller 1989); mentoring schemes for women in science and engineering is another classic type example.

To organise a formal peer group support network for the programme under discussion would be difficult. Apart from the wide variety of problems which might be encountered, many students are only at Högskolan Dalarna for a semester and the rest for just 18 months. Figure 2 (the conventional programme structure) shows that the new intake would only overlap with the previous year for one semester. During that semester the more senior students would be preoccupied with their thesis work and most would be reluctant to commit time to other activities, however worthwhile. As already mentioned, the double intake system (as shown in figure 1) has been adopted. This provides some interesting peer-group support possibilities that overcome some of the difficulties mentioned. This will be discussed in more detail below.

The Staggered Intake Structure – An Implicit Peer Support Network
In general, universities are organised on a year-by-year basis. Each yearly cohort goes through the system as a group. Within a class there is therefore a feeling of equality and solidarity – each member of the class views their classmates as contemporaries. Peer support is often organised from outside of the group (for example provided by students from the year above).

With the staggered intake system, we have an approximately 60/40 mix of students who are newcomers and students who have already completed a semester (henceforth known as the *old timers*). The bias towards new students is caused mainly by the fact that some students only study at Högskolan Dalarna for a single semester (the occasional drop out also results in less students in the second semester). The majority of students (approx 80%) are not Swedish and do not speak the Swedish language. Thus most students need to reorient substantially on arrival. (We hasten to add that all tuition on the programme is in English!)

This somewhat unique situation has led to the emergence of an informal, implicit peer support network. The old timers have automatically taken on a responsibility for helping the newcomers to settle in and to take care of any problems they have. It has not been necessary to ask anyone to do this job, nor have the faculty of the university had to be actively involved in organising the support network. It has developed in a purely organic fashion.

Some obvious and clear examples of the kinds of support which have emerged are:

A furniture collective
Because of the difficulty of obtaining furnished accommodation, the students on the master's programme have established a furniture collective. This consists of a large collection of second-hand furniture bought by students on the programme. On leaving, students sell/donate furniture to the collective and the newcomers can obtain furniture from the collective for a very low price.

Ride sharing to/from the airport
Many intercontinental flights depart from Arlanda Airport in Stockholm early in the morning or arrive late at night. This makes travel from/to Dalarna by train impossible without an overnight stay. To get around this problem, the students have arranged their own ride-sharing and pick-up service.

Ethnic food events
To promote cultural exchange and social integration, the students regularly arrange ethnic food evenings, to which the staff are also invited. Students of different nationalities take it in turns to prepare a meal typical of their country.

Many other less obviously visible, kinds of support are offered by the old timers. They help the newcomers find course and timetable information on the university website and help them to understand what is expected of them by their teachers. Many students find that the Swedish higher education system is less hierarchical than their home country. Students are expected to set their own learning agenda and some visiting students find this difficult to adjust to.

Questionnaire Survey

To explore these issues and to gain further insight into the less visible aspects of the support, we performed a questionnaire survey of the students on the programme. A total of 18 responses were received; we feel that this was a reasonable response rate given that the programme has 30 places and not all students are in class every day (the survey was carried out on a single day). A copy of survey is reproduced at the end of the paper (appendix 1). In the discussion that follows, note that the data from some of the questions have been aggregated for the sake of brevity.
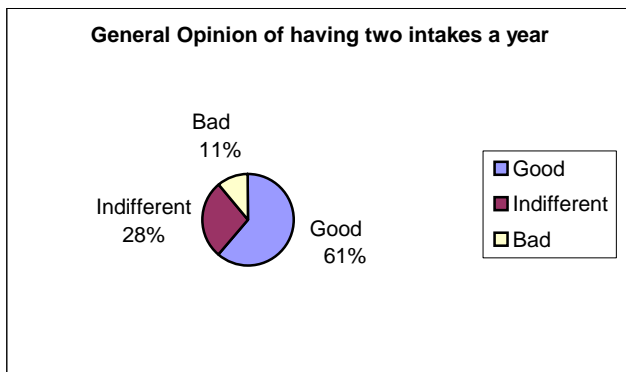
As an initial cross-check we asked the students whether they indeed thought that the semesters were truly independent. Since much of the discussion in this paper is predicated on that basic supposition, it is important to find out whether the students agree with our (naturally somewhat subjective) opinion of independence. Figure 3 shows the result.
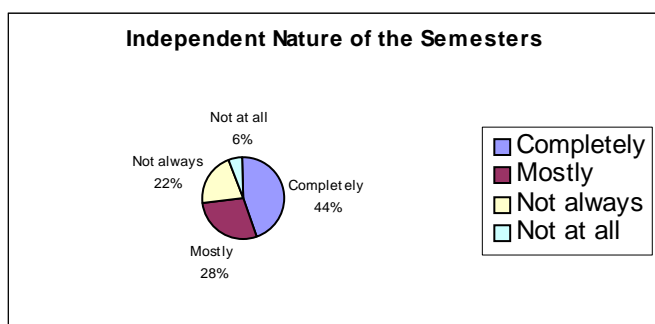
Figure 3. Students response to a question concerning the independence of the semesters
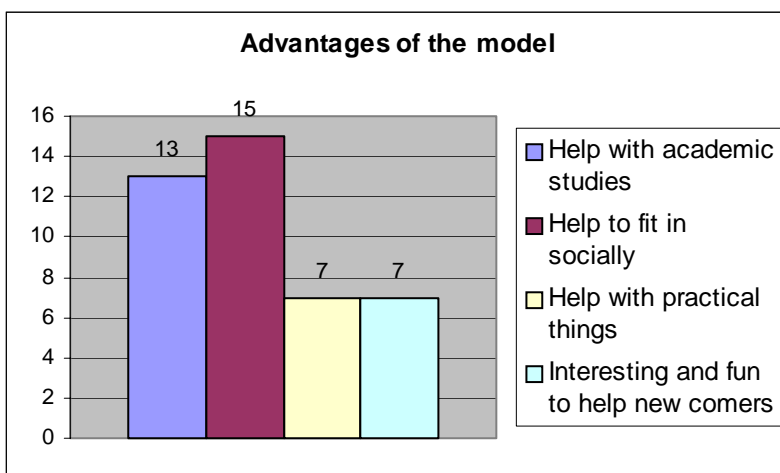
A clear majority agree that the semesters are completely or mostly independent, with only a single student claiming that the semesters are not at all independent. Obviously it is impossible to not have any inter-relationship at all (the semesters naturally cover related academic subjects); if the authors were asked to reply truthfully to the question we would probably reply "mostly"! However, the double-intake system

alleviates the problem of occasional dependence. Half the class are old timers and have studied the material in the previous semester. Their knowledge is available to newcomers during informal discussions and laboratory sessions and this enables minor problems of interdependency to be cleared up without reference to the teacher. In general, the students were positive to the structure of the programme (figure 4).

General Opinion of having two intakes a year

Bad
11%

Indifferent
28%

Good
61%

- Good
- Indifferent
- Bad

Figure 4. Students general opinion concerning the structure of the programme

This is of course reassuring, but what is more interesting is exactly what the students found good about the structure. What are the perceived benefits of the staggered intake structure? Figure 5 illustrates the relative weight of various postulated benefits.

Advantages of the model

13 15 7 7

- Help with academic studies
- Help to fit in socially
- Help with practical things
- Interesting and fun to help new comers

Figure 5. Perceived advantages of the staggered intake structure

Of particular interest is the number of students (with a strong bias towards the old timers) who felt that it was "interesting and fun to help the newcomers". This confirms the findings of earlier research (Ashwin 2003, Whitman 1988) which has popularised the phrase "to teach is to learn twice". What is remarkable about our findings is that the students concerned, were not explicitly asked to help the newcomers. It seems that some measure pedagogical ambition and skill is to be found in most of our students and it is clearly incumbent on the professional teaching staff of universities to nurture and develop this resource.

Furthermore the efforts of the old timers are appreciated by the newcomers. A large number of students (with a bias towards the newcomers) report that "help with academic studies" is an advantage of the programme structure. The bias is not so strong this way around, presumably because some of the old timers still remember being helped when they were newcomers.

However, some students were less than completely satisfied. What were the perceived problems? Figure 6 sheds some light on the issue.
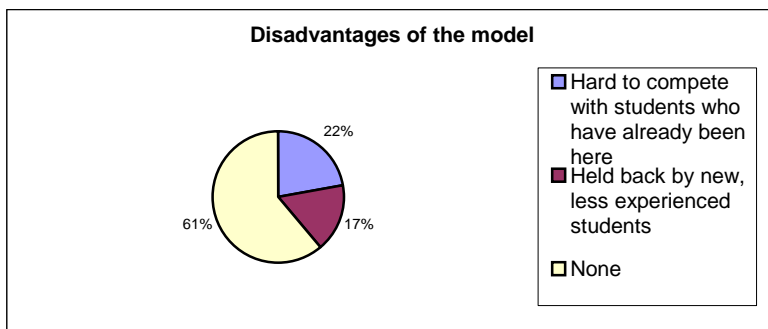
Figure 6. Perceived disadvantages of the staggered intake structure

Although the students were given the chance to indicate other difficulties, none were reported. It seems that the non-heterogeneous nature of the student body in the classes does make some students uncomfortable and this should be seen as the main disadvantage of the programme structure.
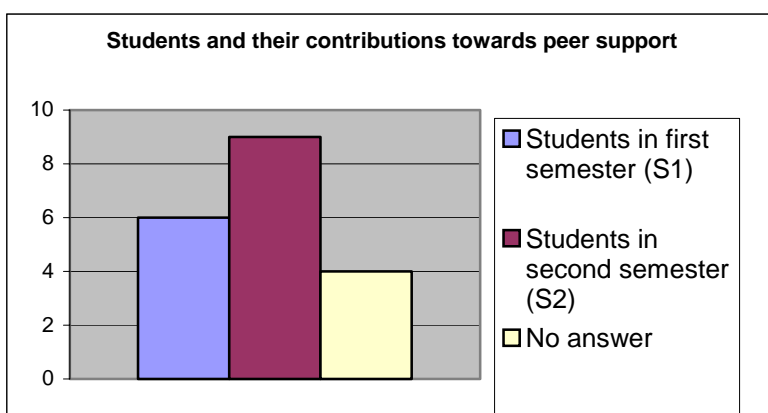

Figure 7. Students contribution for the peer support

Discussion, Future Directions and Conclusions

First it must be pointed out that the results presented in this paper are from one rather small survey on a single programme. Larger surveys over a more diverse population are needed to generate reliable quantitative conclusions. More in-depth qualitative research is needed to gain deeper insight and to better triangulate the results.

Secondly, creating independent semester takes careful thought and may not be easily implemented in all subjects. However, the implicit peer support which the programme fosters allows minor dependencies to be handled and these actually encourage student discussions.

Thirdly it is interesting to discuss how the programme and the staggered intake structure will have to be modified when the programme is adapted to the Bologna protocol; the process of European harmonisation of higher education. The Bologna protocol specifies a standard length of two years for a master programme, rather than the 1½ years currently implemented in the programme described. This leads to a "triple stagger" (figure 8).
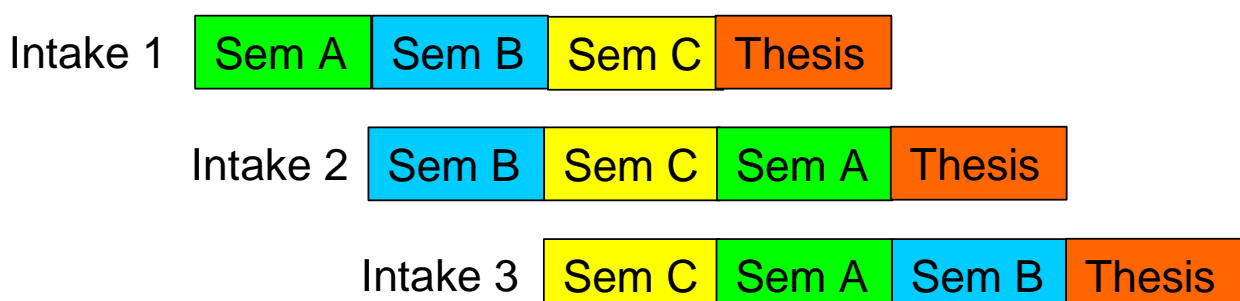
Figure 8: triple stagger structure

The only real complication with this structure is that each taught semester is now given only every 18 months. This could cause some timetabling problems and initial confusion.

In conclusion, despite the reservations we have made above concerning our research methods, we have no hesitation in recommending the staggered intake structure. The deliberate mixing of newcomers and old timers in the classroom lends itself admirably to peer support and enhanced learning outcomes. The implicit peer support network which has built up has also saved support staff in the university a great deal of effort. To watch the students organising themselves and taking both individual and collective responsibility for a whole variety of issues at their own volition has been a uniquely rewarding experience.

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Appendix 1: Questionnaire On the Master Programme

As you may know, the international masters programme in computer engineering has two taught semesters, each designed to be independent. There are several reasons for this:

- So that students can study a semester somewhere else (e.g. Finland), which gives more flexibility

- So that we can have two intakes a year into the programme

- To make it easier to update the courses in the programme

I would like to know what you, the students think about this. Please therefore answer the following questionnaire:

I am studying at Borlänge for: the whole programme ☐   a single semester ☐

If you are studying for the whole programme are you in your:

First semester ☐   second semester ☐

Do you think the semesters are really independent:

Completely ☐   mostly☐   not always☐   not at all☐

Because we have two intakes a year, this means that students who have just arrived are sitting in class with students who have already been here a semester.

What is you general opinion of this arrangement?

Good☐   indifferent☐   bad☐

What (if any) are the advantages – tick all which apply

Help with academic studies☐
Help with practical aspect of study (e.g. course website) ☐
Help to fit in socially ☐
Help to "learn" about the town and Swedish culture☐
Help with practical things (e.g. to find a bicycle, furniture, etc)☐
Interesting and fun to help the newcomers ☐
Other (say what):

Are there any disadvantages?

Hard to compete with students who have already been here ☐
Held back by new, less experienced, students ☐
Less feeling of being in a "class" together ☐
Other (say what)

Because we have two intakes a year it also means you can start studying the programme at two points in the year. Is this useful?

Yes☐   no☐

We are considering further developing the programme into a two-year programme (in line with (the Bologna agreement on European harmonisation of further education). If this happens we will have three taught semesters. If we keep the same two entry system we will need to have all three semesters independent and run each semester once every 18 months, according to the following schedule:

First intake   S1 S2 S3 project
Second intake   S2 S3 S1 project
Third intake   S3 S1 S2 project

Is this structure easy to understand?

Yes☐   no☐

Do you think having three independent semesters (and a relatively broad programme) is a good idea, or would you prefer a more linear programme, which can achieve more depth in fewer specific subjects?

Good with a broad programme☐   don't mind☐   prefer more depth ☐

Any further comments/feedback: