

LAPPEENRANTA UNIVERSITY OF TECHNOLOGY

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Experiences of Organising the Master of Science Programme in Packaging Technology

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1 INTRODUCTION

1.1 *Background*

Master of Science Degree Programme in Packaging Technology is an international part-time programme addressed primarily to adult students already working in packaging related businesses. Teaching and lectures of major courses are scheduled into so-called intensive weeks, which of there are approximately eight to ten per academic year. Applicants are required to have a Bachelor of Science Degree or equivalent degree in mechanical engineering, process engineering, forestry product marketing, or other technical discipline. Other applicable degrees are Master of Science in food sciences, economics and business administration, forestry, or equivalent.

The degree programme was formerly titled “New Packaging Solution” (NPS); in academic year 2010–2011, the title will be changed to “Mechanical Engineering”, having a major in Packaging Technology. In this report, the degree programme is referred as packaging technology (PT) programme. Similarly, all former and present students are referred as packaging technology (PT) students. The degree programme was launched in year 2006 in Lappeenranta University of Technology, and the fifth generation of new students will start in the autumn 2010.

1.2 *Scope and objectives*

Organising the PT- programme for full-time working adult students is a challenging task as it is an international programme with both domestic and foreign students with different educational background.

The purpose of this individual project work is to provide both student and lecturer feedback for improving Master Of Science Degree Programme in Packaging Technology to meet better the requirements of part-time studying. The objective of this work is in accordance with the Lappeenranta University of Technology’s strategy to improve continuously degree programmes and courses and to use student feedback in this development work of education.

Matters, such as lecture schemes, distance material distribution, distance assignment handling, course assessments, and guidance of thesis work will be under scrutiny.

1.3 Study's relation to other studies and literature in the field of adult education in master's degree programmes

This is the first study that has been done among students and lecturers in the packaging technology master's degree programme. Similar studies, where the adult students' experiences of organisation of master's degree programmes are handled extensively, have been done in Lappeenranta University of Technology, but they are not publicly available.

There exists also several other studies having the focus on students' experiences, for example Tero Saarenpää's study of IT-students¹, or they touch this subject. In year 2004, Ministry of Education published Jaana Puukka's disquisition² on master's degree programmes that were executed on structural funds, and where one Lappeenranta University of Technology's master's degree programme was evaluated. A part of that evaluation was based on students' experiences.

1.4 Literature review of master's degree programmes and features of adult students

The literature review has been done using following keywords: "adult education", "adult learning", "adult studying", and "master's degree programme". In addition, equivalent search words in Finnish were used.

According to Finland's Ministry of Education's act on master's degree, master's degree programmes aim at a higher academic degree (a master's degree) that is based on an academic bachelor's degree or another equivalent degree, such as a degree from a Finnish polytechnic (university of applied sciences), and they have a separate student selection process. Master's degree programmes follow also separate curricula. The programmes are typically multidisciplinary, thematic, or professional (business-oriented) entities that add such value that a conventional one-subject- or multidisciplinary-education

¹ Tero Saarenpää. (2007) "Ollaan niin kun niin sekalainen seurakunta kuin vaan voi"
-Ammattikorkeakoulutaustaisten opiskelijoiden heterogeeniset valmiudet yliopisto-opiskeluun. Tietojenkäsittely-
tieteiden laitos. Tampereen yliopisto

² Jaana Puukka. (2004). Vakinaistaa vai ei? Opetusministeriön selvitys rakennerahastovaroin toteutetuista maisteriohjelmista. Opetusministeriön työryhmämuistioita ja selvityksiä 2004:18. Opetusministeriö.

does not offer. (Opetusministeriön asetus yliopistojen maisteriohjelmista 2009; Ministry of Education 2008)

The number of Lappeenranta University of Technology's (LUT) adult student is growing constantly. In year 2009, about ten percent of all basic degree students were classified as adult students. In LUT teacher's quality manual, according to LUT 2013 strategy, it is mentioned that degree programmes and courses must be continuously developed to promote high quality and performance. In addition, the importance of student feedback in developing education is emphasized in the LUT's strategy. Based on the feedback given by LUT's students, they value flexible studies, easy accessibility to teaching material, up-to-date instructions, and efficient communication. All these factors are undoubtedly more than crucial for students studying in part-time adult education programmes where there are only few contact-teaching periods per academic year. Adding distance-learning possibilities is one feasible solution for adding flexibility in to studies. However, students give value on contact teaching and group working (that requires presence) more than web-based teaching. (Alaoutinen et al. 2009: 24; Raivola et al 2002.)

In comparison to young students, adult students are more aware of their objectives concerning studying. This means that their views should be taken into account when planning studies. Therefore, the personnel's approach to studying and learning should be such where students have active role. (Raivola et al. 2002; Öystilä 2008; Lassila & Trinidad 2009.)

Typically, master's degree programmes have a strict structure. This means that a degree programme has a certain structure that determines how studies proceed. However, structured programme does not necessarily limit so-called academic freedom as the adult degree students have the same rights as conventional students. Despite the adult students' "awareness" and structured programmes, a student who starts her or his studies after a long pause needs support and study counselling. Working adult students need study counselling especially at the beginning of their studies and while doing master's thesis. For example, possibility to do often required complementary studies, for instance in an open university, before the actual programme starts needs to be communicated. Studies done beforehand may lower barriers to studying in a university; as well, they provide student a good start. (Raivola et al. 2002; Öystilä 2008; Lassila & Trinidad 2009.)

According to evaluation of master's degree programmes in Helsinki School of Economics in Raivola et al. (2002), master's degree students have experienced that the education is

sometimes too practical and scientifically too thin. Depending on the educational background, it is possible to graduate without having an understanding what is science and personal experience of doing research. As the degrees of admitted student become more and more diverse, the threats mentioned previously will become more evident. However, in Raivola et al. (2002) it was emphasized that all the master's theses are done and supervised systematic and in accordance with scientific requirements. (Raivola et al. 2002.)

1.5 Key points of the research report

In this research report, results from both lecturer and student feedback data are presented. The data for this report was collected by electronic means, and it was collected from lecturers and students who have attended the programme (classes 2006-2009). The results of the student feedback are organised to follow the structure of the student feedback questionnaire. The results from student and lecturer feedback are also discussed and analysed. Based on the results, development areas are discussed in the conclusions section.

The results of the student and lecturer feedback will be published in a form of a practice paper in a national OTE ESR -project's seminar held on 9–10 December 2010 in Espoo, Finland. OTE project's focus is on supporting and developing organisation of education of technology. The project is implemented by five Finnish universities and five universities of applied sciences. One of these is Lappeenranta University of Technology (LUT).

2 METHODS

2.1 Introduction to methods

The method used for the collection of student feedback data was a web-based questionnaire. Lecturer feedback was collected with an informal form that was sent by email. Materials used in this study are data from student questionnaire and lecturer feedback.

2.2 Collection of student and lecturer feedback data

Student experience and feedback data was collected with a questionnaire including a selection of different claims and a text field for free commenting. Claims were presented

using a five-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree). Respondents were motivated with lottery of goods and a chance to have an effect on the ongoing degree programme. Before sending the questionnaire to PT-students, it was checked and edited with and approved by Lappeenranta University of Technology's OTE-project members: Henry Lindell, Annikka Nurkka, Risto Seppänen, and Anne Salmela.

The questionnaire was divided into maximum of seven sections. The number of sections to be answered was determined by the respondent's student status: (1) "Present", (2) "Present and doing my master's thesis", (3) "Graduated", or (4) "Temporarily absent". The first section was for collecting background information. Other sections were titled as "Thesis guidance", "Individual project work (IPW)", "Organisation of major studies", "Organisation of minor studies", "Organisation of general studies", "Organisation of complementary studies", and lastly "Open feedback". The Individual Project Work section was addressed to students who had done their project works. Even though the questionnaire was about organisation of the *whole* PT-programme, the section dealing with major studies included more detailed questions than sections of other studies. The complete questionnaire is in appendix. The questionnaire was generated by a web-based programme called Webropol.

Link to the web-based questionnaire was sent in June 2010 by email including a cover letter to fifty-one students - former and present. Although the aim of this work was to improve the degree programme to meet better the requirements of part-time students, it was seen necessary to ask also full-time student feedback. The majority of the questions and claims were worded so that all the graduates and present students could answer them and communicate what needs to be improved. All the answers were handled both confidentially and anonymously. Contact information details needed for the lottery were collected with a separate web-based form that had its own web address.

3 RESULTS

3.1 *Student feedback*

3.1.1 Background information

The questionnaire was sent by e-mail to fifty-one former and present students. Twenty students answered, which is approximately 39 % out of fifty-one. Number of respondents per class is shown in Table 1.

Table 1. Number of respondents per class.

Class	Respondents
2006	4
2007	6
2008	6
2009	4
Total	20

The majority (17/20; 85 %) of the respondents were Finns; fifteen percent (3/20) of the respondents were international students. According to the contact information list generated for sending the questionnaire, seventeen percent of former and present PT-students are international students.

The majority of the packaging technology students' working status was either full-time or part-time employee (13/20; 65 %). Three classified their working status as other, which meant in case of two respondents that the part time of their studies they were full-time employees. Thus, the share of working students was seventy-five percent (15/20; 75 %). Only two of the respondents were not working during studies.

Sixty percent of the PT-students worked in forest or packaging industry. Industry sectors of working students' employers are introduced in Table 2.

Table 2. Industry sectors of working students' employers.

Industry	(N=15)
Forest/paper/board, packaging or printing	9
Food	3
Other	3

Packaging technology students' educational backgrounds differ more than the work-related background (Table 3). Most of the packaging technology students had a bachelor's degree (15/20). Five students had a master's degree. Fifteen students clarified their field of education (Table 3).

Table 3. Field of education.

Bachelor of Sc. or Eng. (N=11)		Master's degree (N=4)	
Automation	1	Chemistry	3
Environment technology or environment and health	2	Economics	1
Food technology	1		
Industrial engineering	1		
Logistics	1		
Mechanics	1		
Media engineering	1		
Packaging	1		
Process Technology	2		

Students were asked how their studies had proceeded in terms of credits (question 8). They were asked about the total number of completed credits, how many complementary courses in terms of credits they have/had to complete and how many recognized (compensation) credits they had received from previous studies or work experience. It seems that not all the respondents understood the terms "complementary" or "recognized". Some respondents claimed that they had to do complementary courses of over hundred credits, whereas sixty credits is the maximum number in complementary studies. Similarly, some respondents claimed that they had over hundred recognized credits. Due to controversial answers between questions 8-10, and between questions 17 "Student status" and 11 "I have succeeded to combine studies and work", answers of six respondents were excluded from the results handled in the following.

As it is presented in Table 4, most (11/14) of the working students (status full-time, part-time employee or other) strongly agreed or agreed they have succeeded to combine studies and work. This shows also in the number of completed credits (Table 4). One respondent who disagreed the claim 11 "I have succeeded to combine studies and work" gave following explanation:

1. *"It has not been always possible to take part all of the lectures because of work. The most difficult issue has been completing courses that have to be completed with day students."*

Table 4. Success in combining studies and work and progress according to initial study plan. G= Graduated, P & M = Present and doing master's thesis, P=Present.

4. Start- ing Year	17. Stu- dent status	Grad. or planned grad. year	6. Wor- king statu s	8. Total number of com- pleted credits	9. Number of comple- mentary courses in credits	10. Number of rec- ognized credits	11. I have suc- ceeded to com- bine studies and work.	13. My studies (have) pro- gressed accord- ing to my initial study plan.
2006	G	2009	Full- time	156	36	10	0	2
2006	G	2010	Full- time	145	0	0	4	4
2006	G	2009	Full- time	123	20	0	4	4
2006	P&M	2010	Full- time	113	0	0	4	2
2007	P		Full- time	108	20	19	4	5
2007	P		Part- time	127	0	14	4	2
2007	P	2010	Othe- r	114	29	6	4	2
2007	P&M	2010	Othe- r	104	16	14	4	3
2008	P		Full- time	88	4	0	3	3
2008	P		Full- time	57	30	0	2	2
2008	P&M	2010	Full- time	149	9	6	5	5
2008	P&M	2010	Full- time	88	21	9	4	4
2009	P		Full- time	66	28	30	4	4
2009	P		Full- time	61	28	6	4	3

In claim 13, "My studies (have) progressed according to my initial study plan", only six of fifteen part-time students agreed or totally agreed. Five part-time students disagreed and provided following explanations:

1. "It took a longer time for me to complete my master's thesis as were expected."
2. "I was forced to change job. [Company] arrangements at [location]. This has postponed my graduation."
3. "I could complete all my courses and even extra courses on time, but it has been challenging to find master's thesis topic, and actually I haven't found it yet."

4. *"I planned to finish my studies this spring [2010], but the master's thesis was not realised in the schedule that I [had] planned. Also, the matter that language courses were not [taught] during intensive weeks (during this 2nd semester) has delayed finishing my studies."*
5. *"Read the answer above."*

When investigating all answers to the claim 13, "My studies (have) progressed according to my initial study plan", it was found that nine agreed or strongly agreed; six neither agreed nor disagreed; and five disagreed that their studies had progressed according to their original study plans.

When asking feedback about student counselling, fifty-five percent of all respondents agreed or strongly agreed that they were satisfied with study counselling (Figure 1).

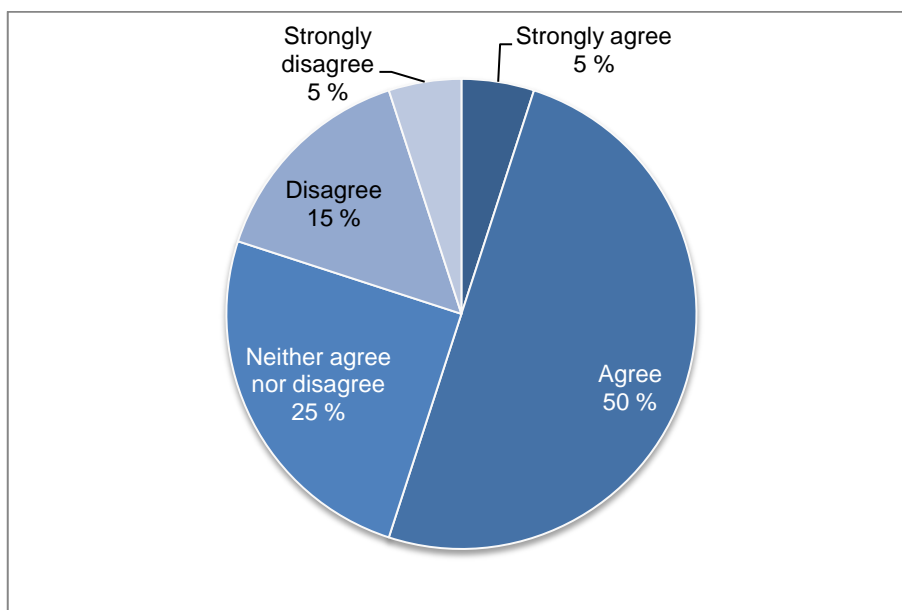


Figure 1. Claim 15: "I am satisfied with student counselling", N=20.

Those who were not satisfied with student counselling gave following explanations:

1. *"There has been a very little counselling during this programme" (Starting year, 2007)*
2. *"Especially during this 2nd semester, the counselling could have been better. This is due to the resources. Also, some kind of warning in advance of this 2nd year's down-grading would have been good." (Starting year, 2007)*
3. *"It hasn't been easy to reach the student planner." (Starting year, 2008)*

4. *"The LUT staff is not willing to answer when consulted. They just advice to check the study guide, WebOodi, the teaching schedule, and the changes in the teaching schedules." (Starting year, 2009)*

3.1.2 Thesis guidance

Claims and open text fields 18–24 dealt with the guidance of master's thesis. This part of the questionnaire was addressed to those whose student status was *graduated*, or *present and doing my master's thesis*. Twelve students belonged to this group. One member of this group did not answer to claims dealing the master's thesis guidance.

Seventy-three percent (8/11) of this group agreed claim 18, "The thesis guidance is/was organised well to fit to part-time studying". Nine percent (1/11) was in disagreement, and eighteen percent (2/11) neither agreed nor disagreed. The distribution of all answer is shown in Figure 2.

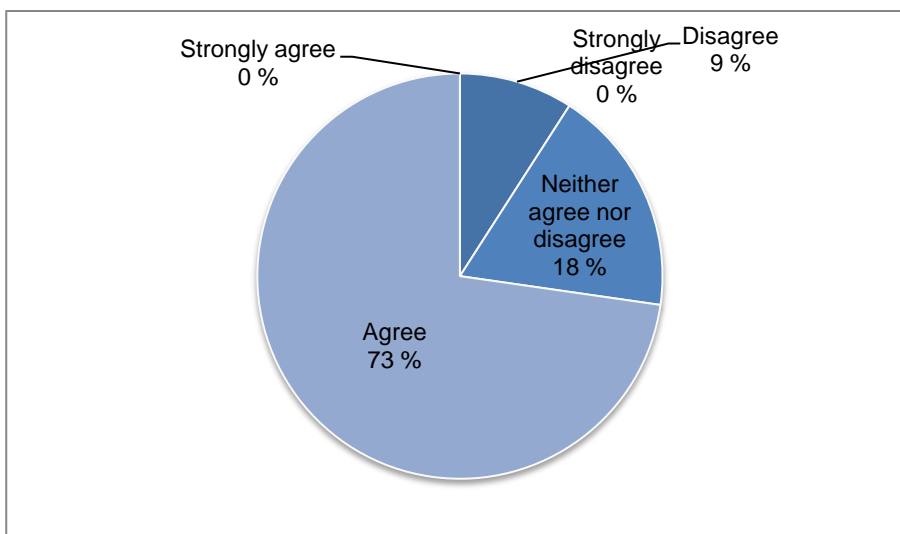


Figure 2. Claim 18: The thesis guidance is/was organised well to fit to part-time studying. N=11.

Claim 19 was "The thesis guidance has been/was useful". The distribution of all answers to claim 19 is shown in Figure 3. Over half of the respondents agreed or strongly agreed with claim 19. Over one third's answer was "Neither agree nor disagree". Those who disagreed, or strongly disagreed with the claim 19 were asked to give further explanation. One respondent disagreed; the explanation was:

1. *"I would have wanted more guidance from the school side." (Graduated, part-time student)*

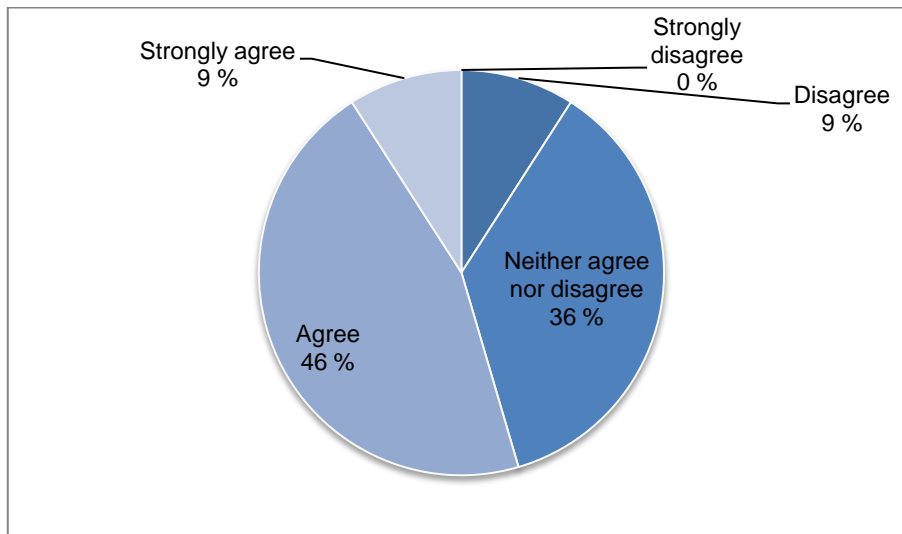


Figure 3. Claim 19: The thesis guidance has been/was useful. N=11.

Claim 21 was "Thesis topic was easy to find". Again, over half of the respondents agreed (3/11) or strongly agreed (3/11). Three neither agreed nor disagreed. One disagreed, and one strongly disagreed. Those who answered 1 or 2 (strongly disagree or disagree), were asked to give further explanations. They were following:

1. *"I could not leave my full time job to do the thesis. The job I was doing was not related to studies; I could not get a thesis topic that was related to work."* (Graduated)
2. *"It is too difficult to find a topic from a company."* (Present and doing master's thesis, full-time student)

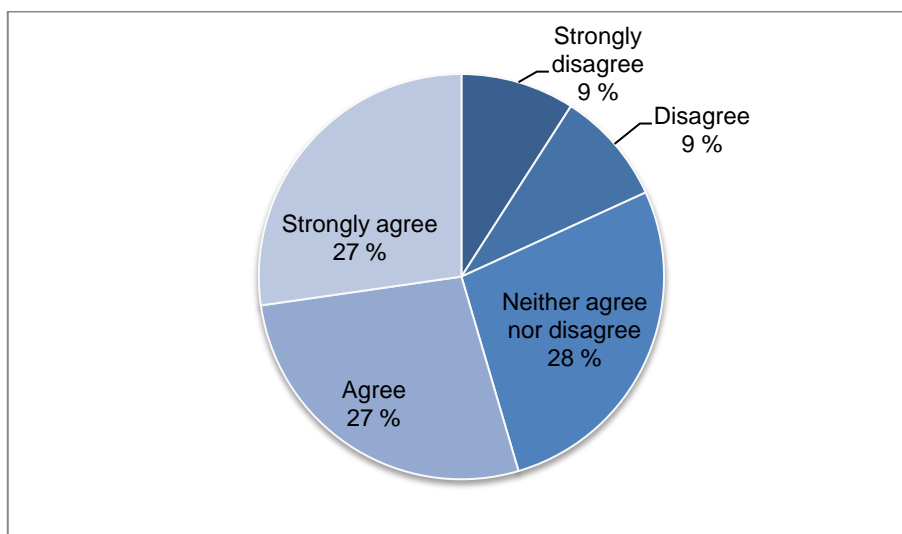


Figure 4. Claim 21: Thesis topic was easy to find. N=11.

The maturity exam is part of the master's thesis process. The maturity exam measures language skills, and a student's knowledge the topic of his or her thesis. In LUT, students can take the exam on a computer in a class called Exam Aquarium. When a student is going to take an exam in Exam Aquarium, she or he books beforehand a suitable time according to Exam Aquariums office hours. The maturity test can be taken also in the conventional way as a supervised exam. (Exam Aquarium 2010.)

The last claim (23) in the set dealing with master's thesis guidance was: "The way of taking the maturity exam is/was flexible". Eight respondents answered. Six respondents of eight agreed or strongly agreed. Two of eight neither agreed nor disagreed. None of the respondents disagreed or strongly disagreed.

3.1.3 Individual Project Work course

According to Lappeenranta University of Technology's study guide 2009-2010, Individual Project Work (IPW) is a course where a student applies methods of engineering or research work to a design or production technology related project that is supervised by a professor, industrial representative, or researcher. This course is addressed to international students (that is all students in international programmes). One of the principle aims of this course is to prepare students for writing master's thesis.

In the student questionnaire, a brief section handled the Individual Project Work. Claims handled the IPW's relation to master's thesis, its guidance, and how easy it was to find an IPW-topic. There was also chance to give open feedback. The Individual Project Work section was addressed to students who had completed the course. Claims and answers of the Individual Project Work section are shown in Table 5.

Table 5. IPW claims and answers.

Answer / claim	25. I believe that the IPW prepares/prepared me for doing master's thesis. (N=12)	26. IPW guidance is/was organised well to fit to part-time studying. (N=11)	27. IPW topic was easy to find. (N=12)
Strongly disagree	0	0	0
Disagree	2	0	0
Neither agree nor disagree	1	3	1
Agree	6	5	6
Strongly agree	3	3	5

As it can be seen from the Table 5, most of the students (9/12; 75 %) believed that the IPW will prepare or prepared them for doing master's thesis. The majority felt that the work guidance fitted to part-time studying and that the topic of the work was easy to find. The given open feedback included more criticism:

1. *"If IPW is done outside the university or in a company where you are working, there should be time to get to know the processes and people in IPW's target company." (Part-time employee)*
2. *"IPW is waste of time for part-time studying adults who are involved in projects all the time in the real work life." (Full-time employee)*

3.1.4 Organisation of major studies

This section's purpose was to find out students' opinions concerning organisation of major studies in relation to scheduling, web-based studying possibilities, quality of lectures and lecture material, distribution of lecture material, number of visiting lectures, assignments, and participation in lectures.

Scheduling

Half of the respondents agreed (9/20) or strongly agreed (1/20) claim 30 "Teaching periods are/were intensive enough". Five respondents (25 %) neither agreed nor disagreed claim 30. Five respondents (25 %) disagreed. The percentage of answers to the claim 30 is shown in Figure 5.

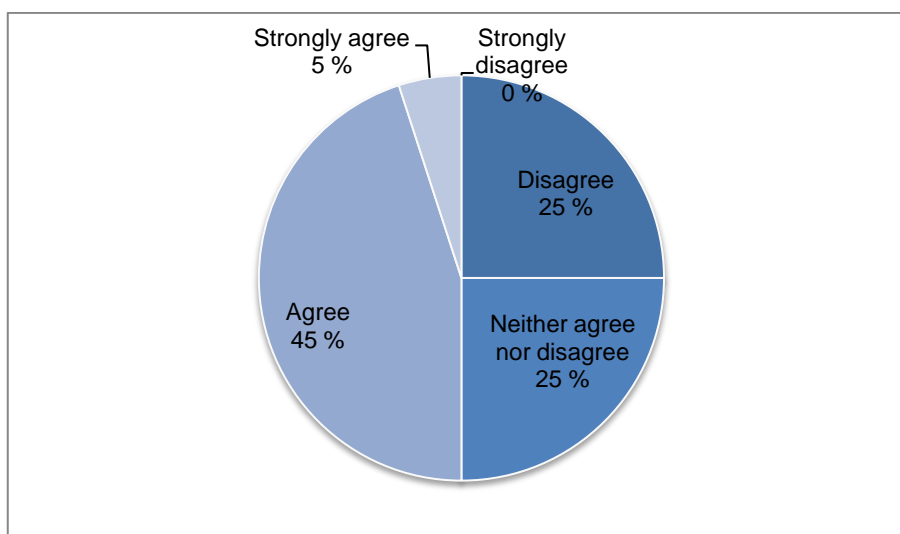


Figure 5. Claim 30: Teaching periods are/were intensive enough. (N=20).

In some Lappeenranta University of Technology's part-time master's degree programmes, the lectures are held weekly from Friday to Saturday. The purpose of the claim 31, "I would (have) prefer(ed) intensive weekends instead of intensive weeks. (Lectures of one course to be held from Friday to Saturday)", was to find, if the intensive weekend lecturing would fit better to part-time studying.

According to answers in claim 30, the majority of students agreed or strongly agreed that teaching periods were scheduled intensively enough. In the case of weekend lectures, most students (9; 45 %) seem to object weekend lecturing. Eight respondents agreed, (40 %). Three respondents (15 %) neither agreed nor disagreed. The percentage of all answers is illustrated in Figure 6

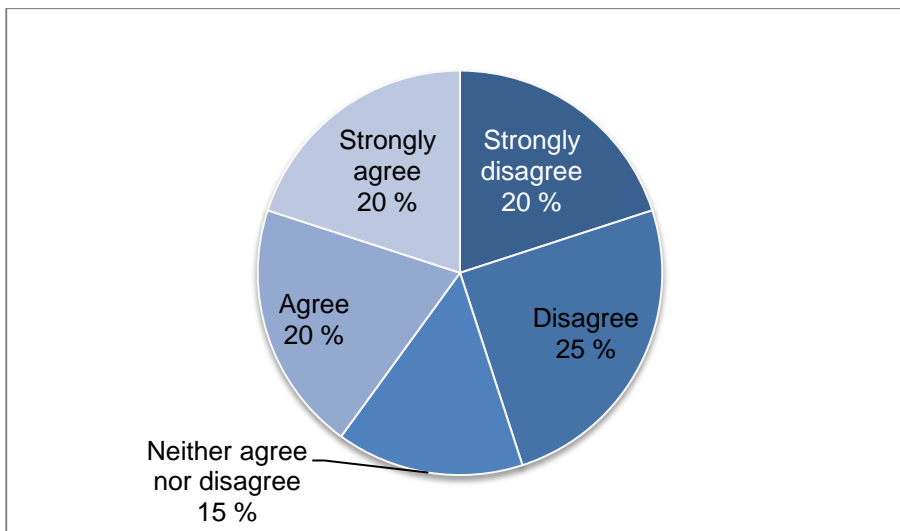


Figure 6.Claim 31: I would (have) prefer(ed) intensive weekends instead of intensive weeks. (Lectures of one course to be held from Friday to Saturday). (N=20).

The subsection of scheduling in major studies ended in an open feedback field. Seven respondents gave open feedback of the scheduling. The given feedback was following:

1. *"It would be better if we got one very intensive week in every month rather than few days every now and then. Also, it would be great if the course lectures won't overlap so much as they do now."* (Full-time employee, starting year 2009)
2. *"It was difficult to attend intensive weeks because I worked full time and travelled extensively abroad due to my work. Week-end studies would have been perfect for me but somehow I managed."* (Full-time employee, starting year 2007)
3. *"One week per month is tight enough."* (Full-time employee, starting year 2009)

4. *"I would have even required more courses concerning mechanical engineering, for example 3 D-modelling, and mandatory calculation exercises."* (Part-time employee, starting year 2007)
5. *"In my point of view, the scheduling was planned for using all time during the university-weeks in the most effective way. Perhaps I could have read more on distance periods, but because of the hectic work with a lot of travelling I really appreciated those days and evenings spent in Lappeenranta. All that time was used for exam preparation or writing etc."* (Full-time employee, starting year 2007)
6. *"1st year it was okay, 2nd wasn't."* (Working status other, starting year 2007)
7. *"It would be optimal, if the courses were organised intensively from Monday to Friday, full days. Not necessarily just one topic or subject per week, but there could be e.g. two courses running parallel (however, seminar works should in this case be coordinated so, that they would not be done exactly at same time). It is also important for a part-time student to get the schedules and study plans, in advance in order to be able to plan other tasks to fit with the studies (e.g. work trips). "* (Full-time employee, starting year 2009)

Course practices

When presenting claim 33, "There should (have) be(en) more web-based studying possibilities", eleven (11/20; 55 %) agreed or strongly agreed. Four (4/20; 20 %) respondents disagreed. The percentage distribution of all the answers is shown in Figure 7.

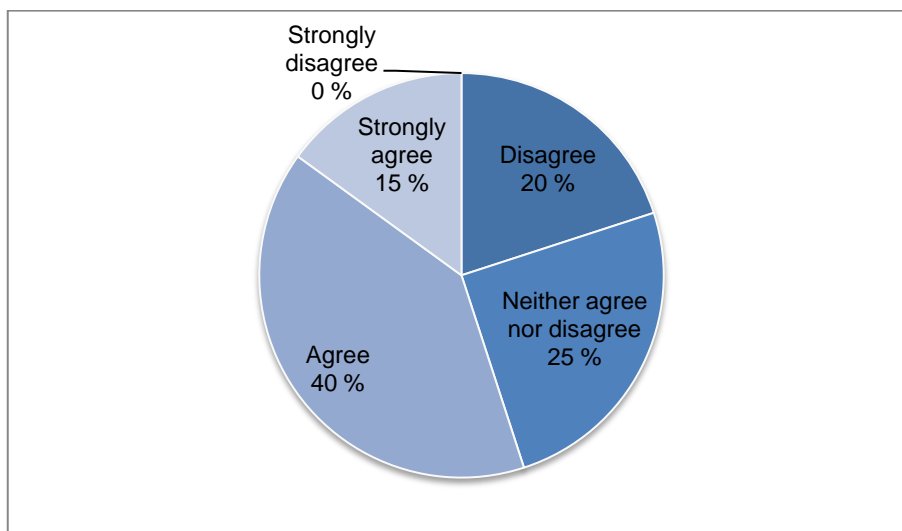


Figure 7. Claim 33: There should (have) be(en) more web-based studying possibilities. (N=20).

The purpose of the claim 34, "Assignments (such as individual and group project works and essays) should have (had) bigger emphasis on courses", was to find if students

wanted to have more active role in providing content to courses instead of conventional lecturing. The percentage of answers presented in Figure 8, which shows that 45 % disagreed or strongly disagreed that assignments should have bigger role on courses. One third neither agreed nor disagreed. The minority, which was fourth of the respondents, agreed or strongly agreed.

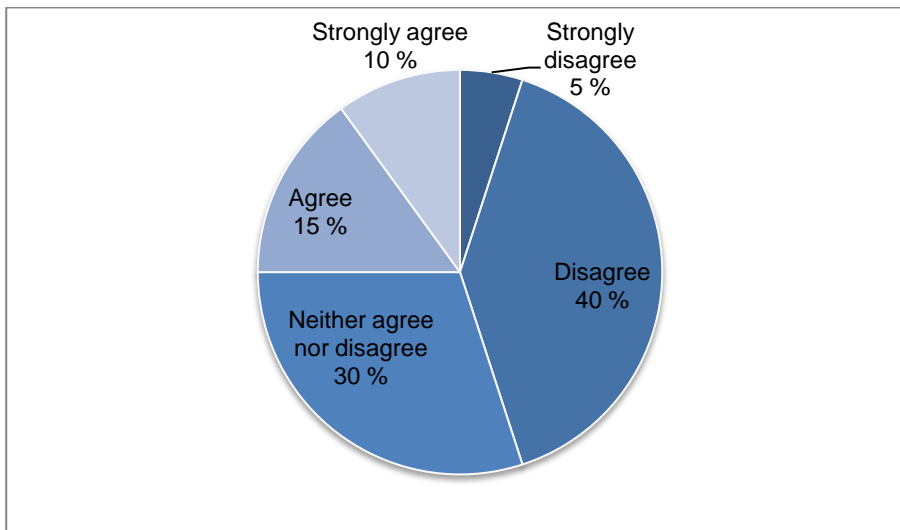


Figure 8. Claim 34: Assignments (such as individual and group project works and essays) should have (had) bigger emphasis on courses. (N=20).

Claim 35 was about participation in lectures. A clear majority (18/20; 90 %), answered “yes” to the claim, “I participate(d) in all, or to almost all lectures”. Two whose answers were “no”, gave following reasons for their absence:

1. *“I work full-time.”*
2. *“Some lectures were prepared badly or not at all. Waste of time. Big part of lectures was ok.”*

Claims 36 and 37 were for investigating students’ opinions of the quality of lecturing in relation to course material, and the quality of lecture materials. Claim 36 was “Lecturing adds/added value to course material”, and claim 37 was “Lecture material is/was comprehensive”.

According to answers in claim 35, which was about participation in lectures, the majority attended to all or to nearly all major subjects’ lectures. In the case of claim 36, about lectures adding value to materials, similarly, altogether 16 (80 %) agreed (8) or strongly

agreed (8). Two (10 %) neither agreed nor disagreed and two (10 %) disagreed. The percentage of agreement to claim 36 is illustrated in Figure 9.

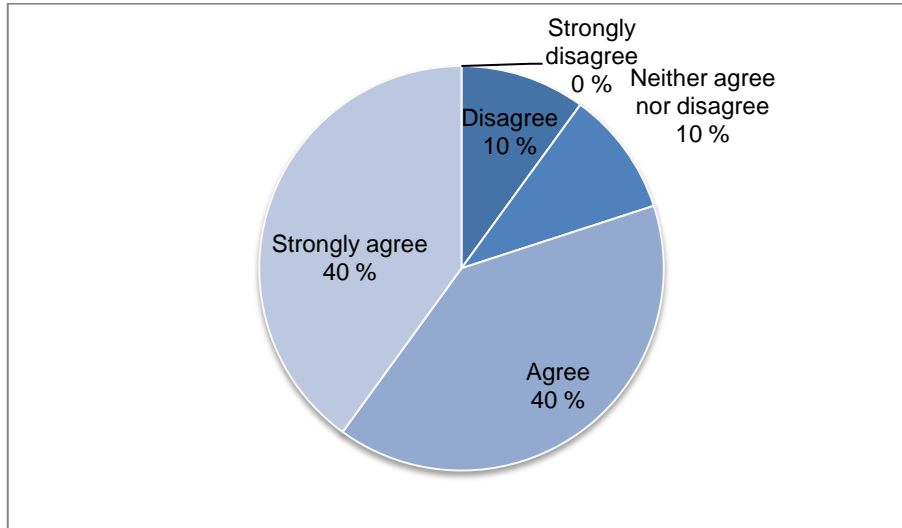


Figure 9. Claim 36: Lecturing adds/added value to course material. (N=20).

When comparing single respondents' answers to the claims 35 and 36, it was observed that two respondents, who in general did not participate in lectures, still agreed that lecturing adds value to course material. Consistently to that, the two who disagreed the claim 36 about lectures adding value to the materials, still participated in lectures.

Claim 37 dealt with the quality of lecture material. The majority, altogether seventy-five percent agreed or strongly agreed that the lecture material is/was comprehensive (Figure 10).

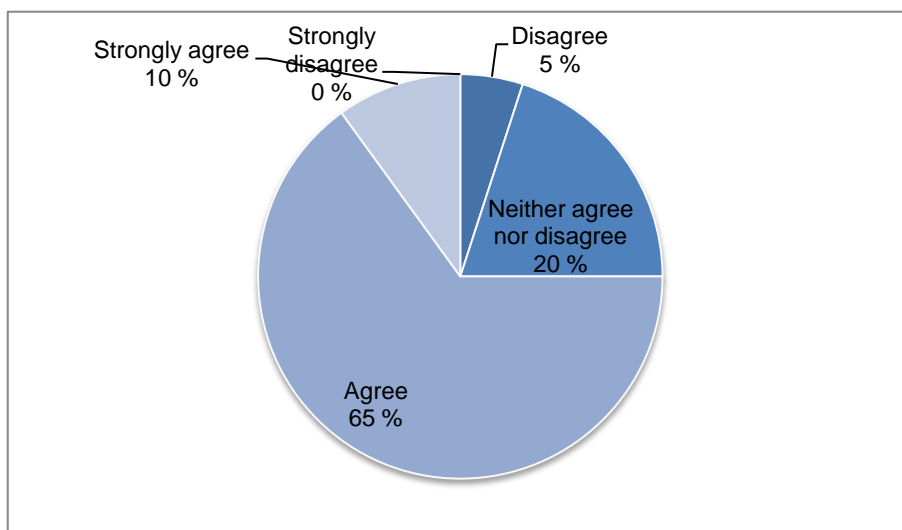


Figure 10. Claim 37: Lecture material is/was comprehensive. (N=20).

According to answers to claim 38 “Lecture material distribution is/was effective”, the majority were satisfied with material distribution (Figure 11). Common practise in the PT-programme has been that a lecturer uploads material to Blackboard or/and to Noppa internet portals for downloading. Nonetheless, one comment given in the open feedback of the course practices revealed that there have been problems with the portals. Existence of similar problems emerged also in lecturer feedback.

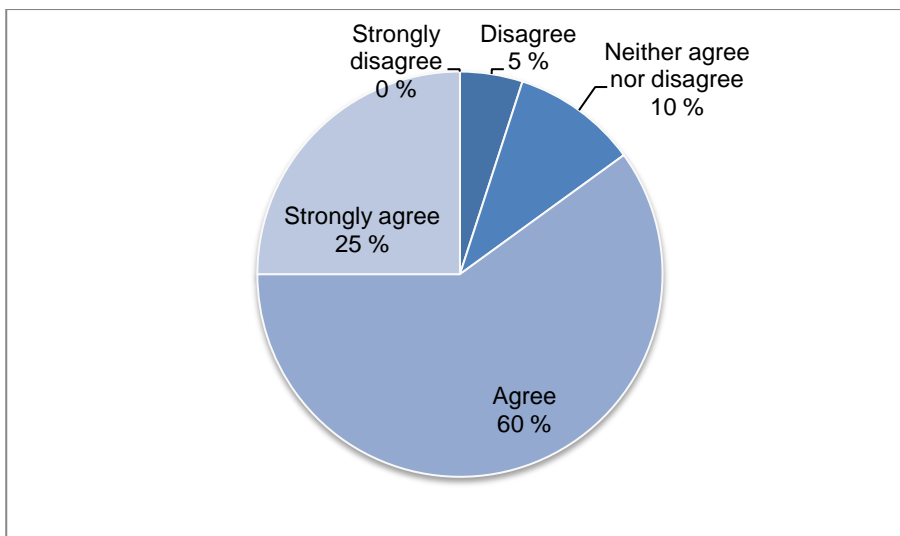


Figure 11. Claim 38: Lecture material distribution is/was effective. (N=20).

The professor of packaging technology has been typically in response of most of the PT-courses. Around half of the courses of packaging technology have had visiting lectures. They can be responsible for only a part or lectures or all lectures within a course. A visiting lecturer is defined here as a lecturer that comes outside Lappeenranta University of Technology. A visiting lecturer can be a professor in other university or a packaging sector representative. Claim 39 was “There should (have) be(en) more visiting lecturers”. The percentage of respondents’ answers is illustrated in Figure 12, which shows that clear majority (12 of 20; 60 %) either agreed or strongly agreed. In disagreement there were fifteen percent of respondents (3/20; 15 %). The fourth (5/20; 25 %) neither agreed nor disagreed.

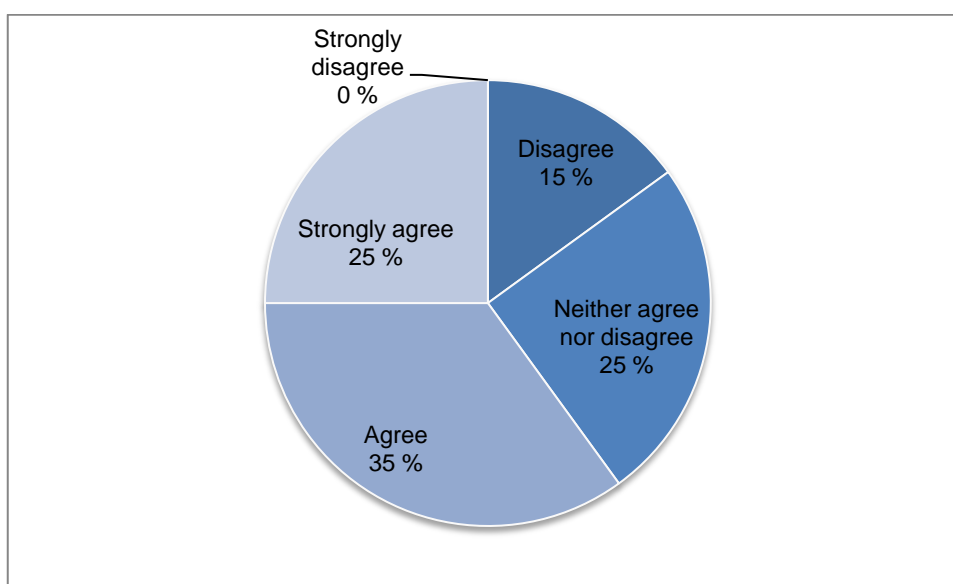


Figure 12. Claim 39: There should (have) be(en) more visiting lecturers. (N=20).

The part dealing with course practices in major courses ended to a chance to give “Open feedback of the course practices”. That feedback was following:

1. *“I would have preferred more individual exams. When it concerns group works there are always those better students who are doing lot of work, and still the course grade is the same for the whole group. Individual exams are better.”*
2. *“I think that all of the courses have not been at university level, and the teaching has not been scientific enough. I also think that in some courses the work load does not come together with the credits you receive from the course.”*
3. *“There were quite some difficulties with the tools like Blackboard. Also, downloading files from BB takes a lot of time. It was more efficient, when the lecturer distributed the files on a memory stick, from which everybody was able to download them on the own computer.”*
4. *“It really depends on the lecturer how much the lecturer adds value to the course. Unfortunately, it seems to be so that just few teachers are interested in good lecturing. They have old lecturing materials or they use somebody else’s material or so. It would be great to have real specialists from every field.”*
5. *“If visiting lecturers are coming from companies, they usually advertise their company instead of teaching important things. Professors, experts etc. would be better.”*

Assessments

Usually the only feedbacks that students receive from lectures in major courses are grades regardless of the way of conducting the course; an exam, an individual or a group work. Seldom, a student receives - without asking - detailed information of how the grade

was formulated. The grades are communicated to students via electronic course-register system called WebOodi.

The purpose of the claim 41, “Communication of course assessments (via WebOodi) is/was convenient”, was to find if the students were satisfied with the current situation explained previously. According to the answers (Figure 13), students (80 % in agreement or in strong agreement) seem to be happy with a short-spoken feedback.

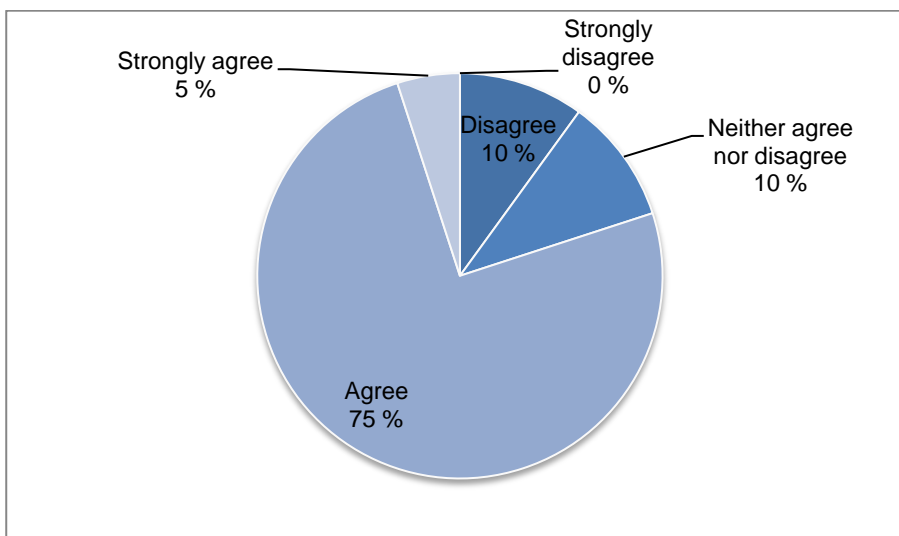


Figure 13. Claim 41: Communication of course assessments (via WebOodi) is/was convenient. (N=20).

It is strongly possible that the claim 41 is understood differently than the questioner has meant. Respondents may have understood that the claim was about functionality of the WebOodi, rather than the possible need of more detailed assessment. This is the impression that comes from an open feedback of course assessments, which was following:

1. *“Sometimes it took quite a long time before the results appeared in WebOodi, otherwise it is a good system, while accessible from anywhere in internet.”*

Exams

Claims and open feedback field 43–45 considered organisation of exams in major courses. Typically, an exam of a course is organised one to four times per academic year. Most of the course exams are taken in the conventional way. Few course exams and nearly all maturity exams are taken in so-called Exam Aquarium way, in which a student

selects when she or he wants to take an exam. Instead of pencil and paper, answers are written in computer.

Claim 43 was about flexibility of conventional exams. Sixteen of twenty strongly agreed or agreed “exams were organised in a flexible way”. Three neither agreed nor disagreed the claim 43. One respondent disagreed exams being organised in a flexible way. The percentage of answers to claim 43 is illustrated in Figure 14.

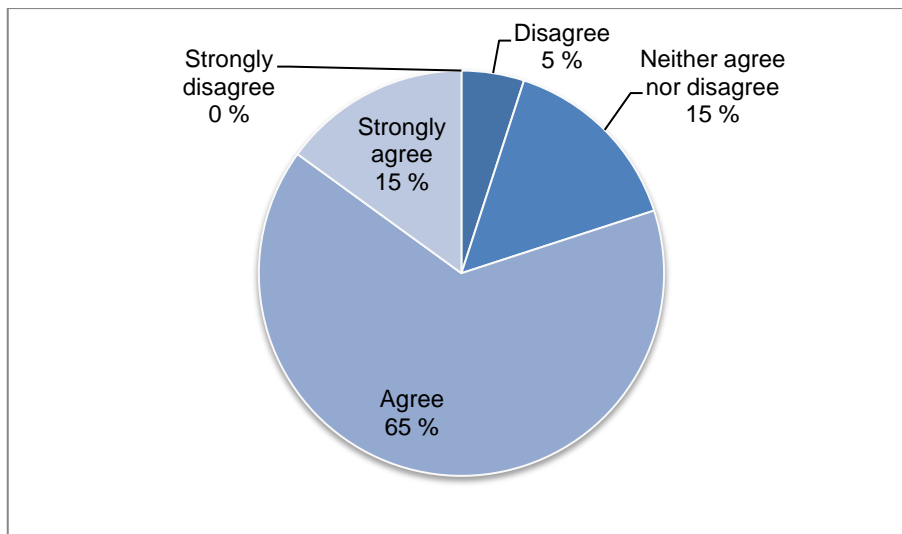


Figure 14. Claim 43: Exams are/were organised in a flexible way. (N=20).

It has been discussed that in some of the packaging technology courses there could be a chance to take the exam in Exam Aquarium. Claim 44 was “I would (have) prefer(ed) “Exam Aquarium” for taking exams.” According to the answers illustrated in Figure 15, the attitude to taking exam in Exam Aquarium is segmented quite equally between agreement, disagreement, and neutral attitude.

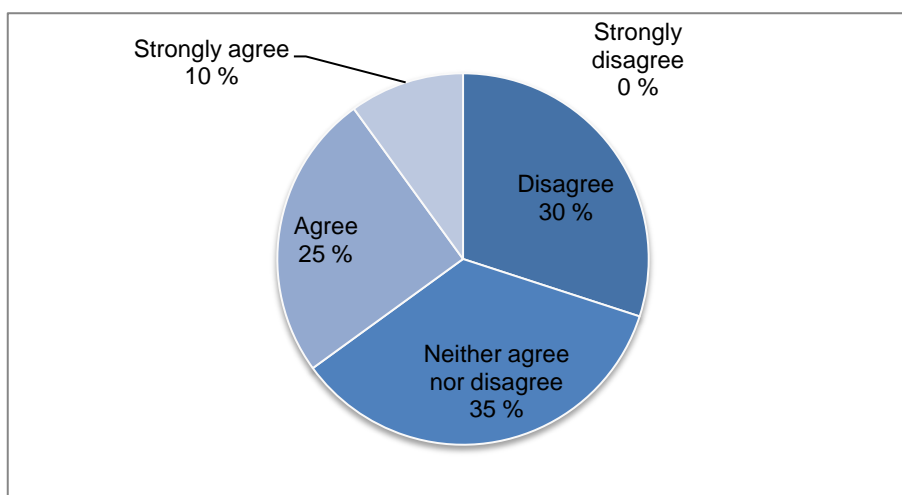


Figure 15. Claim 44: I would (have) prefer(ed) Exam Aquarium for taking exams. (N=20).

One respondent gave open feedback of the exams concentrating more on the content of exams rather than the organisation of the exam:

1. *“Some of the exams have had totally different questions than the course lectures or material have discussed.”*

3.1.5 Organisation of minor studies

In this section, there were claims that handled if it was easy to find an adequate minor subject and courses that fit to part-time studying. The minor subject and courses recommended in study guides for packaging technology students are presented in Table 6, which points out clearly that minor courses were scheduled to fit part-time studying only for two first PT-classes. Over the years, besides the organisation and scheduling of the minor courses, also, the recommended courses have changed a lot, not to mention the recent change of recommended minor subject from industrial management to manufacturing.

Table 6. Recommended minor subjects, courses, and their teaching according to study guides for PT-students (Study guides 2006-2010).

Study guide	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Recommended minor subject	Industrial Management	Industrial Management	No recommended minor subject	Industrial Management	Manufacturing
Minor courses	Supply Chain Management	Supply Chain Management	No recommended minor courses	Introduction to International Business for NPS-programme	Materials Science
	Decision-making in Supply Chain	Decision-making in Supply Chain		Transportation Systems	Basics of Welding Technology
	Technology Management	Technology Management		Management of Technology	Laser Processing
	Information & Knowledge Management in Innovative Enterprises	Information & Knowledge Management in Innovative Enterprises		Strategic Entrepreneurship in Age of Uncertainty	Advanced Production Engineering
				Technology Commercialization and Corporate Venturing	
Teaching	All in intensive periods, special arrangements in scheduling for PT-students.	All in intensive periods, special arrangements in scheduling for PT-students.		Two of five are taught in intensive periods. No special arrangements in scheduling for PT-students.	Conventional lectures with full-time students, one self-study course

In claim 46, it was asked if it was easy to find an adequate minor subject. Only sixteen of twenty respondents answered because, in general, those who have a Master's Degree do not usually have to do minor studies. The clear majority of seventy-five percent (12/16) agreed or strongly agreed it was easy to find an adequate minor subject. However, nineteen percent (2/16) of respondents disagreed strongly with the claim 46. The complete percentage of answers is presented in Figure 16.

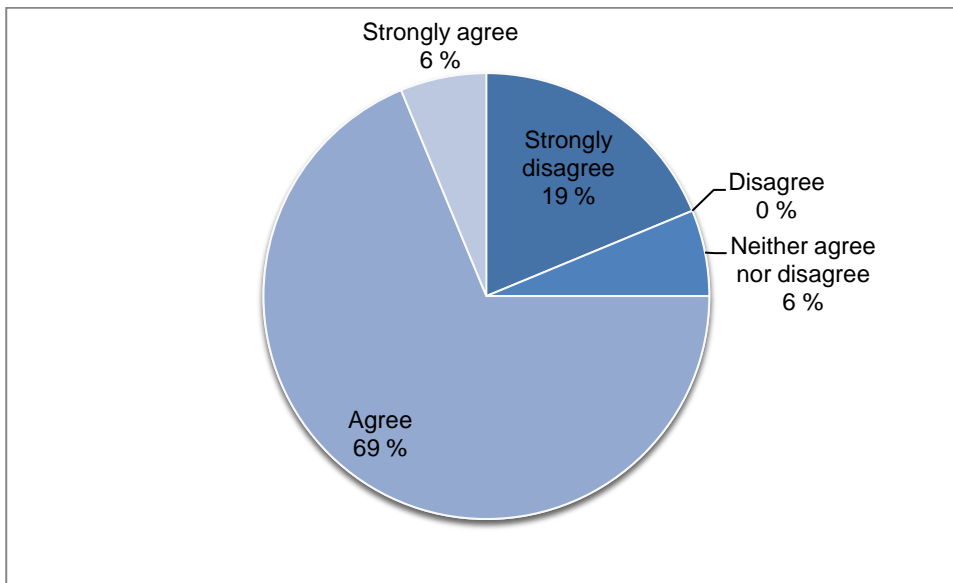


Figure 16. Claim 46: It was easy to find a right minor subject. (N=16).

The next claim was addressed only to working part-time students; thus there were fourteen respondents. Claim 47 was: "It was easy to find minor subject courses that fit to part-time studying". Five respondents (5/14; 36 %) agreed. Altogether six (43 %) respondents disagreed or strongly disagreed. The number of respondents who neither agreed nor disagreed was three (21 %). In comparison to previous claim (see Figure 16), the difference between different answers in claim 47 is not that evident as Figure 17 shows.

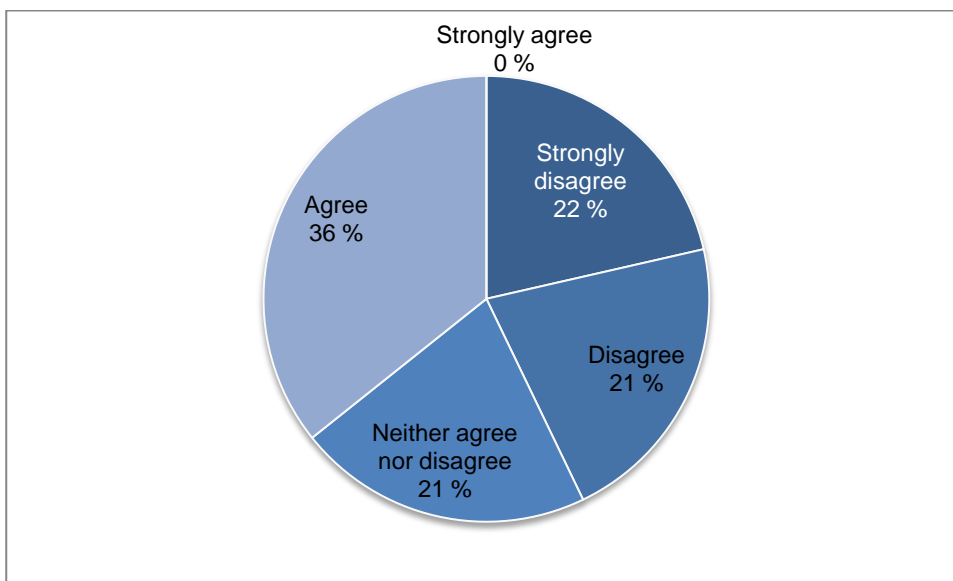


Figure 17. Claim 47: It was easy to find minor subject courses that fit to part-time studying. (N=14).

In claim 48, it was asked if the minor subject/courses recommended in the study guide are in relation to major subject. Sixteen respondents answered. As it can be seen from Figure 18, over half either agreed or strongly agreed. One fourth either disagreed or strongly disagreed. Nearly fifth neither agreed nor disagreed.

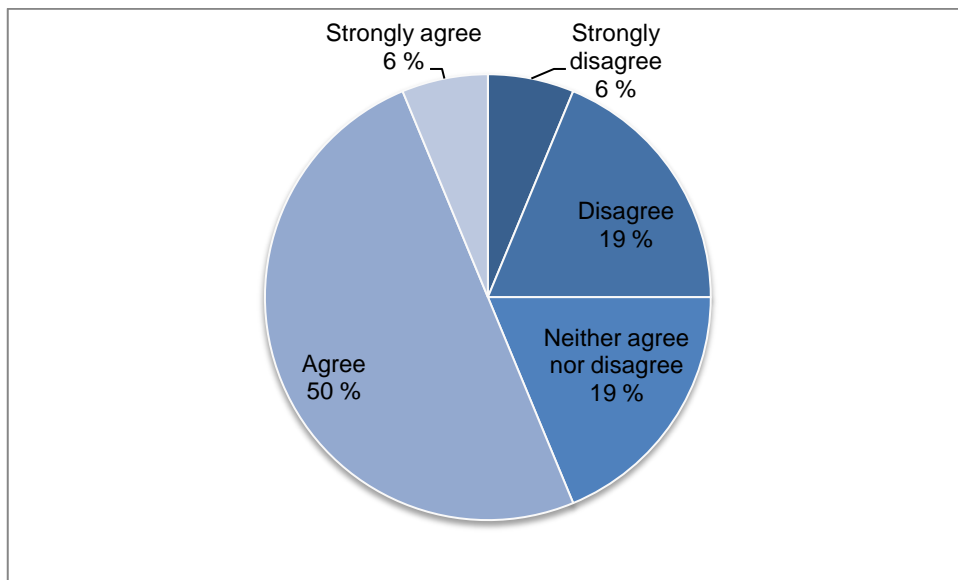


Figure 18. Claim 48: Minor subject/courses recommend in the study guide are suitable in relation to major subject (N=16).

The organisation of minor studies ended in text field for open feedback of the minor studies. Following feedback was received:

1. *"I find it very difficult to take part in minor subject courses because they are not arranged as intensive courses." (Full-time employee, starting year 2008)*
2. *"We did have just one option for minor subject, and we chose 4 courses from 5 available courses. I would not say that we had a freedom of choice. Also, I do not think that privatisation of railroads supports my major studies at all." (Full-time employee, starting year 2009)*
3. *"The positive feedback is because I did my minor studies in spring 2008 when those courses were organised in the intensive manner and as one package." (Working status: other, starting year 2007)*
4. *"Our minor subject was set beforehand." (Working status: other, starting year 2007)*

3.1.6 Organisation of general studies

Claim 50, “General studies are/were organised well to fit to part-time studying” was addressed to working part-time students. Eighteen students answered. As it is illustrated in Figure 19, altogether, the half of respondents agreed (8/18), or strongly agreed (1/18), but also a significant number of respondents disagreed (5/18) or strongly disagreed (1/18).

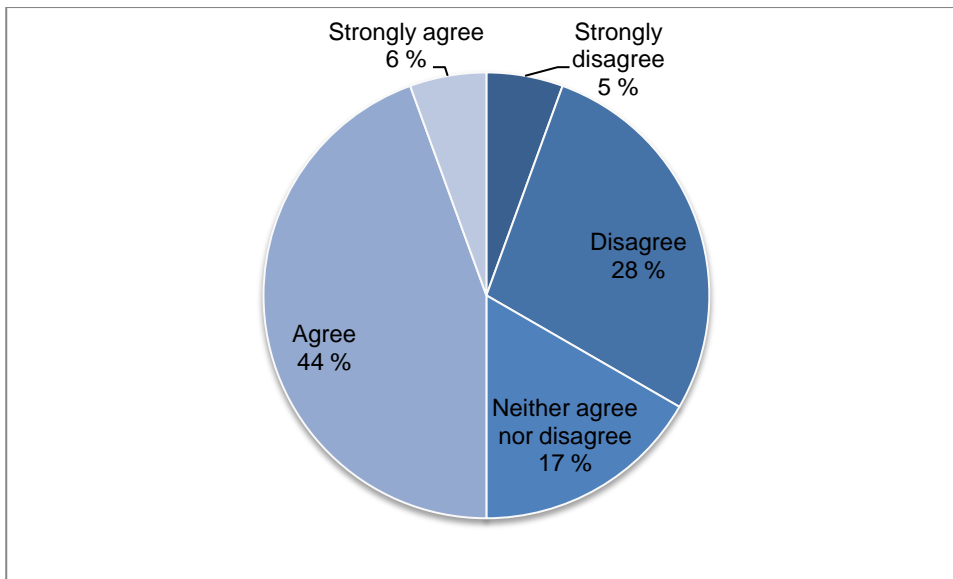


Figure 19. Claim 50: General studies are/were organised well to fit to part-time studying (N=18).

Explanation to disagreement to the claim 50, “General studies are/were organised well to fit to part-time studying”, were found from open feedback concerning general studies. Open feedback was following:

1. *“For a student who works and studies at the same time, it is very hard to make all those needed language studies as they are not intensive courses, and also the attendance is often needed in the language courses.”*
2. *“Some language courses require almost full attendance.”*
3. *“Language studies like “Aspects of Culture” are really waste of time. There should be English courses concerning work life; like negotiation and so on; that course was good, but” Aspects of Culture” should be replaced with major studies.”*
4. *“Participating in the language courses, especially, is very hard to organise when you are a part-time student. Almost all language courses require presence in lectures and when those are not organised during intensive weeks the participation is impossible.”*

3.1.7 Organisation of complementary studies

In this section, it was asked, if complementary studies were organised well from the perspectives of part-time students and international students. As it was explained earlier, few students seemed to misunderstand the concept of complementary studies. Besides, a full-time student answered to claim addressed to working part-time students. In this light, answers of five respondents have been excluded from the results in claim 52, “Complementary studies are/were organised well to fit to part-time studying”, which means that there were fourteen respondents. Their answers are illustrated in Figure 20, which shows that the half of the respondents agreed (6/14) or strongly agreed (1/14) that complementary studies were well organised. Nearly thirty percent disagreed (3/14), or strongly disagreed (1/14). Fifth (3/14) neither agreed nor disagreed.

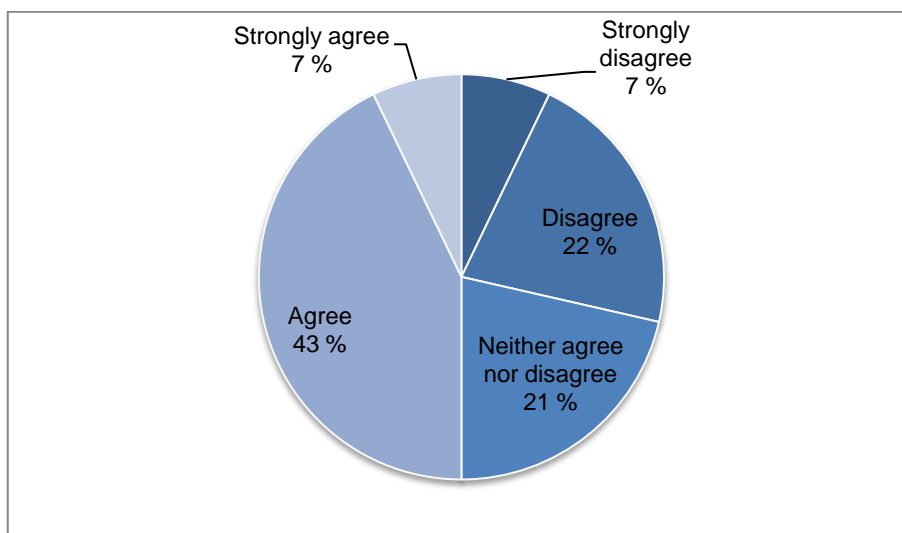


Figure 20. Claim 52: Complementary studies are/were organised well to fit to part-time studying. (N=14)

Claim 53 was “Complementary studies are/were organised well from an international student's point of view”. Four answered, although there were only three international respondents. The “non-international” respondent's answer is not included into the results of the claim 53. Results were following: two disagreed and one strongly disagreed. The section of complementary studies ended in an open feedback field. One respondent gave open feedback of the complementary studies.

1. “Most of the complementary studies are not intensive courses. So it is impossible to be at lectures, even though I would like to.” (Full-time employee, starting year 2009)

3.1.8 Open feedback

The student feedback questionnaire ended in an open feedback field. Respondents were advised that here they could give any feedback concerning studying and the NPS-programme (the PT-programme). Following feedback was received from four respondents:

1. *"There are many subjects which could be discussed for improving the quality of this program. I think it is not obvious that what the goal of this major is. Practical exercises are poor totally. The major is too wide, and this is the worst [thing] because, oppositely, Master's Degree Programmes should be narrower. The support for students in this major, and further for international students, is poor; however, we are the fewest students. But we have not enough facilities or concentration on students, and totally we could have far more better result in producing knowledge but I think we are poor. Connection to the industry also is poor and we have less practical know-how unless we have a job in packaging industry by ourselves".(Full-time student, starting year 2009)*
2. *"Some courses have been really good, some (too much) just waste of time. Also I am not happy with the schedules, too much overlapping with lectures and too little intensive teaching." (Full-time employee, starting year 2009)*
3. *"Selection process should be more strict and tight and time to time there where possibility to do oral exam (with one question) if you could not pass the exam. What is that? There should be same treatment for everyone, if you do not pass exam you will take it over and over again." (Part-time employee, starting year 2007)*
4. *"For me almost everything fitted perfect in our NPS-programme, and I graduated after 18 months of studies. I also enjoyed very much my time in Lappeenranta. It was always like a short holiday for me to come there for the studies; campus located near by the university. My best regards to the fantastic personnel - without them and especially with help of Mrs Minna Loikkanen I would not been able to graduate so quickly. She is a fantastic lady, and her help for us was essential for progressing in studies in time. This is an aspect that all study planners have to take serious - the assisting personnel and their attitude is extremely important for young students, but also for us, the older ones. Please focus in the future in this area, and I am sure you will get students more rapidly out from the university. Big Thanks to all involved in our NPS-studies in Lappeenranta, and Have a Great Summer Time! Best regards, [Name, company]." (Fulltime employee, starting year 2007)*

3.2 Lecturer feedback

In this section, the results of lecturer feedback are presented. An inquiry of lecturer feedback was sent by email to 14 lecturers: both principle lecturers and other lecturers. Four lecturers answered. The lecturer feedback is grouped under titles that were used in answering sheet. Answers of different lecturer respondents are separated with numbers 1-4.

Your experiences of the structure of NPS-programme (PT-programme)

1. *"I think it covers most of the packaging value chain. Perhaps the printing as a value chain function is somewhat under represented due to the fact that it is not a major science at LUT."*
2. *"Because I made it myself, I cannot comment."*
3. *"I'm familiar only with the part of the programme I teach."*
4. *"I don't really know the structure. I have only kept my lectures without knowing the content of the whole programme."*

Your experiences of group sizes and student composition

1. *"In small groups teaching is effective; however it is not feasible from the university point of view. Heterogeneous educational background is always challenging for the teacher but turning this around students with different background can give very good input to the course. Students learn from other students."*
2. *"In my opinion the first group was rather good mixture from various industries. I have not enough information of later groups, so I cannot comment. I feel that some 20 persons would be ideal size."*
3. *"Last time the group size was absolutely too small and non-motivating for the teacher and all speakers."*
4. *"Groups are rather small than big, especially, because very seldom there are more than ten to fifteen students present. Multicultural students make the teaching more demanding and that's fine."*

Your suggestions for improving current practices (lectures, assessments, exams, electronic study tools, material distribution, etc...)

1. *"This is going on all the time; I don't have at the moment new suggestions."*
2. *"Commercial and economical aspects of the package in the value chain should be emphasized. This wish was pointed in the questionnaire, which I made last autumn for programme of supplementary education. Maybe this could be included as an additional topic into some of the present subjects."*
3. *"Blackboard system used by [Lappeenranta University of Technology] does not work with [Company] IT-systems. This complicates the sharing of information with students."*
4. *"The teaching material should be collected together so that all lecturers know exactly the content of the programme. That helps them to make their own material more suitable to the whole programme. Otherwise the teaching tools and facilities have always been ok."*

Your experiences of teaching in NPS-programme (PT-programme): challenges and your solutions and proposals (language, cooperation with other lectures, etc.)

1. *"I got one idea from the Packaging Lines and Machinery course from the students; the seminar work done in groups could be done in project form, having a project leader, a sub project manager 1, a sub project manager 2, and so on."*
2. *"Language: English is OK. Cooperation with other lecturers: there is no cooperation at all; there is no possibility to check any overlaps with other teachers. All teachers could share their materials with each other."*
3. *–*
4. *Language: English is the only option and OK. Cooperation with other lecturers; that should be improved. I don't really have any contact to the other lecturers."*

Your views of NPS-programme (PT-programme); structure, courses, etc...

1. *"Presently it is tailored to the business needs and it has been so for 4 years. Perhaps there should be a re-evaluation after 2-3 years what the structure should be."*
2. *"My view on the programme is included in [previous] answers."*
3. *"The structure I have created is very good; one day for lectures and half a day to discuss the results of students' essays. I'll keep this interactive system also in the future."*
4. *"My personal view to the programme is positive. Still, I am not sure if the standard level is high enough for the university level. It should be more demanding and more scientific."*

Other comments, ideas, feedback, and experiences

1. *"I am pretty happy with the course; most of the graduated students are in work matching to this programme."*
2. *"It may well be that the students would benefit having more freedom to select some subjects outside the present programme. The argument is that many students may come from industries, where the issues do not match too well with NPS-programme."*
3. *"Have you ever checked the quality of 'outside speakers'? Last time when I asked the reason, why only three persons were attending my module, students told me that they have been disappointed with other outside speakers. From this, one can conclude that students didn't want to waste their time attending my lectures. If less than five persons will attend my module next time, I'll cancel my participation and the whole module."*

4. *“There should be some common meetings or feedback gatherings for the lectures to get them more committed to the programme. That would bring also new ideas to improve the whole programme in the future.”*

4 ANALYSIS AND DISCUSSION

The student questionnaire was sent to fifty-one students. The lecturer feedback answer-sheet was sent to fourteen lecturers. Twenty students responded, which is nearly 40 % of all possible respondents. Four lecturers answered, which is nearly 30 % of all possible respondents. It cannot be claimed that the student respondents' answers would reliably represent all students, but they give a strong implication of what could be improved and developed in the Packaging Technology Degree Programme from the student perspective. It applies also to lecturer feedback.

Lecturer feedback

Two lecturer respondents articulated that the structure of the packaging technology programme was unclear to them. Therefore, they have had to design their lectures without knowing how the content of their lectures are positioned to other courses. Some packaging technology courses have several lecturers. If the structure of the packaging technology programme is unclear, so could be the also the content of a multi-lecturer course. Two lecturer respondents demanded for cooperation between the lecturers within a same course. It is obvious that lecturer cooperation within a course should have an organiser - that would be most logically the principle lecturer.

When presenting students a claim, “There should (have) be(en) more visiting lecturers”, most agreed. Still, some students communicated that not all visiting lectures were as qualified as they would expect. According to student feedback, nearly all students participated to all or to almost all lectures and agreed that lectures add quality to lecture material. Still, there had been a worrying situation where only three students participated in a visiting lecture. These participating students had explained the absence of other students that the visiting lectures in the same course did not meet students' expectations. Again, this advocates that organising some kind of cooperation with lecturers is needed, but also that that industry representative lecturers need guidance.

The number of annual admittance of new packaging technology students has varied between ten and twenty. Especially, for a visiting lecturer who is unfamiliar with features of

packaging technology programme, the smallish group size can be confusing. On the other hand, the smallish group size can be seen as a chance enabling effective teaching. A small group, consisting of students with different work and educational background, can provide a course an enriching input, and simultaneously help students to learn from each other, as one lecturer expressed it. A small group provides to lecturer a chance to give students active role in a lecturing session. One lecturer had found a viable, interactive teaching method for a module of two days: one and a half day was spared for lecturing, and half a day for discussion based on students' essays.

Surprising and perhaps alarming result from the lecturer feedback was an articulated concern of the quality of the packaging technology programme. One lecturer asked to ascertain the qualification of visiting lectures, whereas another was perturbed if the programme was demanding enough or at the university level. Also one student respondent expressed similar experiences. In the evaluation of master's degree programmes of Helsinki School of Economics in Raivola et al. (2002), some master's degree students experienced that the education was not scientific enough. The lecturers' concern could be connected to that the structure and aims of the Packaging Technology Degree Programme is unclear to some visiting lectures.

Two lecturers discussed about teaching tools. One lecturer assessed that the teaching tools and facility were good, but the other had had problems in sharing information via Blackboard portal, because employer's IT-systems prevented connection with it. This kind of problems could be solved easily, for example using the other portal (Noppa) for communication and sharing materials, sending materials to principle lecturer to be uploaded, or uploading materials using Lappeenranta University of Technology's facilities.

Student feedback

Most of the students have succeeded in combining work and studies and they have a realistic view of studying and working at the same time. Naturally, the organisation of studies from the school side affects how studies can proceed. The major courses are organised in intensive weeks, but language, minor, and complementary studies are organised in the conventional way (that is weekly lectures and exercises). In addition, most language courses require full attendance, which is impossible for working students, who as well may live abroad or hundreds kilometres away from the university.

Less than half of the part-time students assessed that their studies had progressed according to their initial study plan, which is a bit controversial to how part-time students

evaluate success in combining work and studies. The controversy is due to changes in working life, problems with master's thesis and conventionally scheduled courses. Problems with master's thesis were that students had not found a topic, or completing it took longer than they expected. All this indicates that students need more support from the university at the end of their studies, but they need also a solution how to do "non-intensive" courses already at the beginning of their studies.

This need for counselling, especially at the beginning and at the end of studies, has been showed also in LUT's other student feedback researches (Alaoutinen et al. 2002). On the other hand, a slight majority (11/20) was satisfied with student counselling. Given reasons for dissatisfaction were that the student counselling staff was not available, changes in organisation of studies were not communicated in advance and the provided advises did not answer the actual question.

One section of the student questionnaire was dedicated to master's thesis guidance. This section's purpose was to find what needs to be improved in master's thesis guidance. In year 2010, some of the guidance meetings have been organised as video meetings over internet, and views of involved students and instructors have been positive. Eight of eleven respondents agreed that the thesis guidance was organised to fit part-time studying, and six agreed that thesis guidance was useful. One disagreed, because she or he would have required more guidance from the school side, but did not specify reasons.

Most respondents were working and they worked in packaging or forester sector, and therefore most of them did not have problems finding a thesis topic. Nevertheless, it was difficult for two of the graduates, because one student's work description did not match the degree programme's content and another, an international full-time student could not receive topic from companies. The way, how maturity tests were organised was not a problem to any graduate.

Most of the respondent believed that an Individual Project Work (IPW) course will prepare or prepared them for doing master's thesis, and thought that it was organised to fit part-time studying. This advocates that course should be maintained in the curriculum. In order to make the course more flexible, and further to add flexible studying possibilities, it would be possible to organise packaging technology students' IPW guidance meetings and seminars remotely. This means that students would record their presentation at home, and watch recorded presentations from their computer screen. Previous arrangement requires students to have camera and voice recording equipment and sufficient IT-skills.

The drawback would be that a real-time interaction between a presenter and the audience would not be possible. This kind of approach to the organisation of IPW course could make distance meetings a natural part of master's thesis guidance.

Half of the respondents were satisfied with the scheduling of major studies. Students were asked if they would prefer the intensive weekends on a weekly basis. The students' opinions divided equally between agreement (40 %) and disagreement (45 %) whereas three students attitude was neutral. It seems that there is no need for changing the basic structure of scheduling. However, some working students wished that teaching periods would be organised to be more intensive. This is because in reality an intensive week can last less than five days, and lectures within an intensive week are not in sequential days, which is problematic especially for working students (who have to travel to Lappeenranta from other cities or countries).

A clear majority (90 %) of students participated in all or nearly all lectures and an evident majority (80 %) agreed that lecturing added value to course material. Similarly, generality (75 %) agreed that lecture material was comprehensive. The majority of students were happy with both electronic material distribution and communication of course grades. Sixty percent agreed that there should be more visiting lectures; however, it was articulated that their quality should be guaranteed.

Students were asked if there should have been more web-based studying possibilities. Forty-five percent agreed, where as twenty percent disagreed. It was presumed that the clear majority of students, rather than only 45 %, would have wanted more distance learning possibilities. This, smaller than presumed, percentage is, however, in accordance with the students participation in lectures and the findings presented in LUT's teacher quality manual (Alaoutinen et al. 2002).

Students agreed that taking exams were scheduled flexible. This explains why only thirty-five percent agreed that they would have preferred the Exam Aquarium way.

Students were asked if assignments (including both individual and group works) should have bigger role in the courses. Only five respondents of twenty agreed, and this could be due to negative experiences. One respondent articulated that group works are problematic because not all members give equal work contribution, but all the members get still the same grade.

For classes 2006 and 2007 teaching of minors were organised into intensive periods. Later classes have not been offered any special arrangements. Most of the students (75 %) agreed that it was easy to find an adequate minor subject, but only fifty-eight agreed that it was easy to find minor courses that fit to part-time studying. Explanation for this lower percentage is that only part of minors was arranged as intensive courses. In the case of general studies, only half agreed that they were organised to fit to part-time studying. Explanation for this is found from language studies. General studies included language courses of twelve credits, which is more than in most degrees. However, the number of language credits is reduced to six for class 2010. Most of the language courses' lectures are held weekly and they last typically at least seven weeks, and they require full attendance, which is impossible for working students.

Most of the packaging technology students have to do so-called complementary studies that are not included in the Master's Degree. Students have faced similar problems in complementary studies as in general studies: complementary studies are not integrated into part-time studying scheme. However, half of the respondents (7/14) agreed that complementary studies were organised well to fit to part-time studying.

5 CONCLUSIONS

The evaluation of the Master's Degree Programme in Packaging Technology has now been carried out for the first time involving both student and lecture inquiries. Out of these inquiries, certain topics raised up to be considered for developing the programme in the future.

In general, students were satisfied with student counselling. However, more guidance is needed especially with completing minor, general, and complementary studies that consists of courses that are not integrated into Master's Degree in Packaging Technology's curriculum. In addition, guidance at the end of studies is important. For two groups of students finding a thesis topic is challenging. The first group is students whose job description or employer's sector is not related to packaging. The second group consists of students – mostly international – that have been full-time students.

Most of the students (75 %) agreed that the Individual Project Work (IPW) prepared them for doing master's thesis. Perhaps the connection between the IPW and Master's thesis could be fortified, so that a student could find an IPW topic from which she or he could develop a master's thesis topic. This would facilitate certain groups of students (discussed previously) to start their theses. Actually, this kind of model is currently being piloted. Even

though one of the IPW's meaning is to prepare students for doing the master's thesis, the study guides does not communicate this objective. Thus, learning objectives of the IPW course could be particularised.

Fifty-five percent of students thought that there should be more web-based studying possibilities. One complementary, packaging technology course's introductory lecture is already implemented as a video lecture for the class 2010. In addition, in year 2010 video meeting have been used in thesis guidance. Web-based studying possibilities would fit well for the IPW course; the students would record their IPW seminar presentations for others to watch and comment. When it would be time for thesis, using the video meeting technology would be acquainted and a natural part of thesis guidance.

Students want more visiting lectures, but they expected them to meet academic and the degree programme's requirements and objectives. This requires that the visiting lectures should be integrated more effectively to the context of the programme. Besides the exam questions from a visiting lectures, also other means are needed to commit them to the programme. Most important means, which were actually articulated in lecturer feedback, were improving the coordination of teaching and the communication among different lecturers.

The overall findings of the programme are positive and encourage continuing the programme. The suggestion is to carry out this kind of assessment frequently with few years' intervals.

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Appendix: Student feedback questionnaire

The meaning of this questionnaire is to improve the NPS master's degree programme to meet better the requirements of part time studying.

In order to get the most out of your feedback, please answer to all questions/claims.

All the answers are handled confidentially and anonymously. If you wish to participate in a lottery of goods, please give your contact information details after sending your answers. Few T shirts and other LUT goods will be raffled. Given contact information will NOT be attached to your answers.

BACKGROUND INFORMATION

- 1) Sex *
- 2) Age *
- 3) Nationality *
- 4) Starting year *
- 5) Previous degree(s) and the field of degree *
 - Bachelor of Science
 - Bachelor of Engineering
 - Master's degree
 - Other
- 6) Working status during studies (semesters) *
 - Full-time employee
 - Part-time employee
 - I do not, or did not work during my studies
 - Other, what?
- 7) Industry sector of your employer
- 8) Total number of completed credits (ECTs) * [WebOodi \(web link\)](#)
Please, answer in numbers.
- 9) How many complementary courses in terms of credits do/did you have to complete? *
Please, answer in numbers. Answer 0 if this question does not fit to your curriculum.
- 10) Total number of recognized credits (ECTs) (i.e. the number of compensation credits from previous studies, work experience etc.) *
- 11) I have succeeded to combine studies and work. *This claim is addressed only to part time students who are/were working during studies.*
- 12) If you answered 1 or 2, please give further explanation.
- 13) My studies (have) progressed according to my initial study plan. *
- 14) If you answered 1 or 2, please give further explanation.
- 15) I am satisfied with student counseling. *
- 16) If you answered 1 or 2, please give further explanation.
- 17) Student status *
 - Present
 - Present and doing my master's thesis, planned graduation year
 - Graduated, year
 - Temporarily absent, why?

MASTER'S THESIS GUIDANCE

Following claims about master's thesis guidance are addressed to graduates or students who are doing their theses. Skip this page if you have not graduated or started your thesis.

- 18) The thesis guidance is/was organised well to fit to part time studying.
- 19) The thesis guidance has been/was useful.
- 20) If you answered 1 or 2, please give further explanation.
- 21) Thesis topic was easy to find.
- 22) If you answered 1 or 2, please give further explanation.
- 23) The way of taking the maturity exam is/was flexible.
- 24) OPEN FEEDBACK OF THE MASTER'S THESIS GUIDANCE

INDIVIDUAL PROJECT WORK (IPW)

Following claims about IPW are addressed only to those who have done or are doing their IPW. Skip this page if you have not done or started your IPW.

- 25) I believe that the IPW prepares/prepared me for doing master's thesis.
- 26) IPW guidance is/was organised well to fit to part time studying.
This claim is addressed to part time students.
- 27) IPW topic was easy to find.
- 28) If you answered 1 or 2, please give further explanation.
- 29) OPEN FEEDBACK OF THE IPW

ORGANISATION OF MAJOR STUDIES

Scheduling

- 30) Teaching periods are/were intensive enough. *
- 31) I would (have) prefer(ed) intensive weekends instead of intensive weeks.(Lectures of one course to be held from Friday to Saturday). *
- 32) OPEN FEEDBACK OF THE SCHEDULING

Course practices

- 33) There should (have) be(en) more web based studying possibilities. *
- 34) Assignments (such as individual and group project works and essays) should have (had) bigger emphasis on courses. *
- 35) I participate(d) in all, or to almost all lectures. *
 - Yes.
 - No, why?
- 36) Lecturing adds/added value to course material. *
- 37) Lecture material is/was comprehensive. *
- 38) Lecture material distribution is/was effective. *
- 39) There should (have) be(en) more visiting lecturers. *

40) OPEN FEEDBACK OF THE COURSE PRACTICES**Assessments**

41) Communication of course assessments (via WebOodi) is/was convenient. *

42) OPEN FEEDBACK OF THE ASSESSMENTS**Exams**

43) Exams are/were organised in a flexible way. *

44) I would (have) prefer(ed) "Exam Aquarium" for taking exams. * [Exam Aquarium \(web link\)](#)

45) OPEN FEEDBACK OF THE EXAMS**ORGANISATION OF MINOR STUDIES**

Leave empty, if following claims do not fit to your curriculum.

46) It was easy to find a right minor subject.

47) It was easy to find minor subject courses that fit to part time studying.

Question is addressed only to part time students.

48) Minor subject/courses recommend in the study guide are suitable in relation to major subject. [Study Guide \(Web link\)](#)

49) OPEN FEEDBACK OF THE MINOR STUDIES**ORGANISATION OF GENERAL STUDIES (language, introductory courses)**

50) General studies are/were organised well to fit to part time studying.

Question is addressed for part time students.

51) OPEN FEEDBACK OF THE GENERAL STUDIES**ORGANISATION OF COMPLEMENTARY STUDIES**

52) Complementary studies are/were organised well to fit to part time studying.

Question is addressed for part-time students.

53) Complementary studies are/were organised well from an international student's point of view. *Question is addressed to international students.*

54) OPEN FEEDBACK OF THE COMPLEMENTARY STUDIES**55) OPEN FEEDBACK**

Here you can give any feedback concerning studying and NPS programme.

Contact information for the lottery. *(Voluntary)*

Contact form
Name
Lastname
Email
Address
ZIP code
City
Country
Phone
Dress size