

# Audit of JAMK University of Applied Sciences 2013

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## ABSTRACT

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### Abstract

The Finnish Higher Education Evaluation Council has conducted an audit of JAMK University of Applied Sciences and has awarded the institution with a quality label that is valid for six years from 27 March 2013. The quality system of JAMK University of Applied Sciences fulfils the national criteria set for the quality management of higher education institutions, and the system corresponds to the European quality assurance principles and recommendations for higher education institutions.

The object of the audit was the quality system that JAMK University of Applied Sciences has developed based on its own needs and goals. The optional audit target chosen by the institution was studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students' perspective.

The following were regarded as key strengths of the quality system:

- JAMK has adopted an ambitious institutional strategy with a strong focus on quality of learning, internationalisation and entrepreneurship highlighting also the importance of RDI – and has organised its quality system in a systematic and structured way in order to help provide strategic and operational management to support these strategic objectives.
- There is strong evidence of a commitment to the JAMK quality system amongst management and all staff. There are clearly defined roles and responsibilities for different groups of staff, from senior leadership, quality management development and school quality teams, academic and support staff to students.
- JAMK's quality system, based on the continuous development idea and PDCA-model, is aligned to strategic planning, management and steering of operations; it informs procedures and processes, and generates data required for decision making, development and monitoring implementation and evaluation; strategic planning is organised in a systematic and structured way.

Among others, the following recommendations were given to JAMK University of Applied Sciences:

- Despite developments since JAMK's last audit 2006, the quality system still remains process-oriented, while more emphasis should be placed on developing a deeper and shared understanding, across all its units, of educational and academic quality appropriate for a UAS operating in a competitive and international environment.
- JAMK should embed international systematic benchmarking and peer review with relevant well-recognised peer HEIs as an essential component within the PDCA cycle for all units of the organisation, including support services. This will help ensure that meeting the appropriate educational and academic standards is recognised as the core objective of the whole quality system. These processes should use mission-appropriate quantitative and qualitative indicators.
- JAMK collects a significant amount of data about its performance but level of information is inadequate for an institution wishing to operate at the international level. It should develop a comprehensive institutional research capability to provide good business intelligence, better inform strategic, operational and executive decision-making, and underpin all its activities. This should also enhance the strategic forecasting component of its quality system to help future-proof JAMK against changes nationally and internationally.

### Keywords

Evaluation, audit, quality, quality system, quality management, higher education institutions, university of applied sciences, polytechnics

## TIIVISTELMÄ

### Julkaisija

Korkeakoulujen arviointineuvosto

### Julkaisun nimi

Audit of JAMK University of Applied Sciences 2013 (Jyväskylän ammattikorkeakoulun auditointi 2013)

### Tekijät

Ellen Hazelkorn, Osmo Härkönen, Jens Jungblut, Outi Kallioinen, Attila Pausits, Sirpa Moitus ja Mirella Nordblad

### Tiivistelmä

Korkeakoulujen arviointineuvosto on toteuttanut Jyväskylän ammattikorkeakoulun auditoinnin ja myöntänyt korkeakoululle laatuleiman, joka on voimassa kuusi vuotta 27.3.2013 alkaen. Jyväskylän ammattikorkeakoulun laatujärjestelmä täyttää korkeakoulujen laadunhallinnalle asetetut kansalliset kriteerit ja vastaa eurooppalaisia korkeakoulujen laadunhallinnan periaatteita ja suosituksia.

Auditoinnin kohteena oli Jyväskylän ammattikorkeakoulun laatujärjestelmä, jonka korkeakoulu on kehittänyt omista lähtökohdistaan ja tavoitteidensa mukaisesti. Korkeakoulun valitsema vapaavalintainen auditointikohde oli yrittäjyyteen valmentavat opinnot sekä innovaatiotoiminnan ja yrittäjyyden edistäminen opiskelijoiden näkökulmasta.

Laatujärjestelmän keskeisinä vahvuuksina pidetään:

- Jyväskylän ammattikorkeakoululla on kunnianhimoinen strategia, jonka painopisteitä ovat oppimisen laatu, kansainvälistyminen ja yrittäjyys TKI-toiminnan merkitystä korostaen – sekä systemaattinen ja hyvin jäsennelty laatujärjestelmä, joka tukee strategista ja operationaalista johtoa strategisten tavoitteiden saavuttamisessa.
- Johdon ja koko henkilöstön sitoutumisesta Jyväskylän ammattikorkeakoulun laatujärjestelmään on vahvaa näyttöä. Eri henkilöstöryhmillä on selkeästi määritelty roolit ja vastuut, jotka ulottuvat ylimmästä johdosta, laadunhallinnan kehittämisestä ja yksikkökohtaisista laatuineistä akateemiseen ja tukipalveluhenkilöstöön ja opiskelijoihin saakka.
- Jyväskylän ammattikorkeakoulun laatujärjestelmä, joka perustuu jatkuvan kehittämisen periaatteeseen ja PDCA-malliin, palvelee strategista suunnittelua, johtamista ja toiminnanohjausta; se vaikuttaa menettelytapoihin ja prosesseihin sekä tuottaa päätöksenteossa, kehittämisessä ja toteutuksen seurannassa ja arvioinnissa tarvittavaa tietoa. Kaiken kaikkiaan strateginen suunnittelu toteutuu systemaattisesti ja jäsennellysti.

Jyväskylän ammattikorkeakoululle esitetään muun muassa seuraavia kehittämissuosituksia:

- Vaikka Jyväskylän ammattikorkeakoulu on kehittänyt laatujärjestelmäänsä vuoden 2006 auditoinnin pohjalta, laatujärjestelmä on edelleen prosessilähtöinen. Jatkossa ammattikorkeakoulun tulisi pyrkiä kehittämään kaikille yksiköille yhteinen ja syvällisempi käsitys koulutuksellisesta ja akateemisesta laadusta, jota ammattikorkeakoulun kilpailtu ja kansainvälinen toimintaympäristö edellyttää.
- Jyväskylän ammattikorkeakoulun tulisi sisällyttää säännöllinen kansainvälinen benchmarking ja yhdessä arvostettujen korkeakoulujen kanssa toteutettavat vertaisarvioinnit olennaiseksi osaksi kaikkien yksiköiden, myös tukipalveluiden, PDCA-sykliä. Tämä auttaisi varmistamaan, että asianmukaiset koulutukselliset ja akateemiset laatuvaatimukset tunnustetaan koko laatujärjestelmän ydintavoitteeksi. Näissä prosesseissa tulisi käyttää kuhunkin tarkoitukseen sopivia laadullisia ja määrällisiä tunnuslukuja.
- Jyväskylän ammattikorkeakoulu kerää tuloksistaan huomattavan määrän seurantatietoa, mutta tiedon taso on riittämätön kansainvälisyyteen tähtäävälle korkeakoululle. Ammattikorkeakoulun tulisi kehittää laaja-alaisesti palautetiedon analysointimenetelmiään pystyäkseen tuottamaan laadukasta liiketoimintatietoa, joka tukisi paremmin johdon päätöksentekoa ja luo perustan kaikille toiminnolle. Tämä edistäisi myös laatujärjestelmän strategista ennakointikykyä, jonka avulla Jyväskylän ammattikorkeakoulu pystyy varautumaan tuleviin kansallisiin ja kansainvälisiin muutoksiin.

### Avainsanat

Arviointi, auditointi, laatujärjestelmä, laadunhallinta, laatu, korkeakoulut, ammattikorkeakoulu

## SAMMANDRAG

### Utgivare

Rådet för utvärdering av högskolorna

### Publikation

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### Författare

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### Sammandrag

Rådet för utvärdering av högskolorna har utfört en auditering av Jyväskylä ammattikorkeakoulu och beviljat högskolan en kvalitetsstämpel som är i kraft i sex år från och med den 27 mars 2013. Jyväskylä ammattikorkeakoulus kvalitetssystem uppfyller de nationellt fastställda kriterierna för högskolornas kvalitetshantering, och systemet motsvarar de europeiska principerna och rekommendationerna om högskolornas kvalitetshantering.

Objektet för auditeringen var Jyväskylä ammattikorkeakoulus kvalitetssystem, som högskolan har tagit fram från sina egna utgångspunkter och enligt sina egna mål. Det valfria auditeringsobjekt som högskolan utsett var studier som förbereder för företagsamhet samt främjande av innovationsverksamhet och entreprenörskap ur studerandeperspektiv.

Enligt auditeringsgruppen är kvalitetssystemets centrala styrkor:

- Jyväskylä ammattikorkeakoulu har infört en ambitiös institutionell strategi med starkt fokus på inlärningskvalitet, internationalisering och entreprenörskap. Även vikten av FUI framhävs. Kvalitetssystemet är organiserat på ett systematiskt och strukturerat sätt för att det ska främja en strategisk och operativ ledning som stöder de strategiska målen.
- Det finns klara bevis för att ledningen och hela personalen är engagerade i Jyväskylä ammattikorkeakoulus kvalitetssystem. Olika personalgrupper har klart definierade roller och ansvar, från den högsta ledningen, de som arbetar med utvecklingen av kvalitetshantering och enheters kvalitetsteam, undervisnings- och stödpersonalen till de studerande.
- Jyväskylä ammattikorkeakoulus kvalitetssystem, som bygger på principen om kontinuerlig utveckling och PDCA-modellen, är inriktat på strategisk planering, ledning och styrning av verksamheten; genomsyrar procedurer och processer; samt producerar information som behövs för beslutsfattande, utveckling och övervakning av genomförandet och utvärderingen. Den strategiska planeringen är organiserad på ett systematiskt och strukturerat sätt.

Bland annat följande rekommendationer framläggs för Jyväskylä ammattikorkeakoulu:

- Trots framsteg sedan den senaste auditeringen av Jyväskylä ammattikorkeakoulu 2006 är kvalitetssystemet fortfarande processororienterat. Större vikt borde fästas vid att utveckla en djupare förståelse, som delas av alla enheter, för pedagogisk och akademisk kvalitet som lämpar sig för en yrkeshögskola som är verksam i en konkurrenspräglad och internationell omgivning.
- Jyväskylä ammattikorkeakoulu borde införa internationell systematisk benchmarking och kollegial utvärdering med relevanta välkända högre utbildningsanstalter som en viktig komponent inom PDCA-cykeln för alla enheter inom organisationen, inklusive stödtjänsterna. Detta bidrar till att säkerställa att det erkända centrala målet för hela kvalitetssystemet är att uppfylla adekvat pedagogisk och akademisk standard. Dessa processer borde utnyttja kvantitativa och kvalitativa indikatorer som lämpar sig för uppgiften.
- Jyväskylä ammattikorkeakoulu samlar in en betydande mängd information om sina prestationer, men nivån på informationen är inte adekvat för en institution som vill arbeta internationellt. Man borde utveckla omfattande institutionell forskningsförmåga för att tillhandahålla god affärsintelligens, bättre informera det strategiska, operativa och verkställande beslutsfattandet, och stötta all verksamhet. Detta borde också stärka den strategiska prognoskomponenten i kvalitetssystemet och hjälpa till att framtidssäkra Jyväskylä ammattikorkeakoulu mot nationella och internationella förändringar.

### Nyckelord

Auditering, högskolor, kvalitet, kvalitetshantering, kvalitetssystem, utvärdering, yrkeshögskolor



# Foreword



The national quality assurance framework of higher education in Finland encompasses the higher education institutions, Ministry of Education and Culture and the Finnish Higher Education Evaluation Council (FINHEEC). The higher education institutions are responsible for the quality of their education and other operations<sup>1</sup>. The institutions have a legal obligation to regularly undergo external evaluations of their operations and quality systems. The Ministry of Education and Culture has the main steering and decision making power including performance based funding to higher education institutions, entitlement to award degrees, and operational licences of the universities of applied sciences. The role of FINHEEC as a national quality assurance agency is to assist the higher education institutions and the Ministry of Education and Culture in matters related to higher education and support the higher education institutions in the development of their quality systems through evaluation and other activities.

Over the period 2005–2012, FINHEEC carried out audits of the quality systems of all higher education institutions in Finland. The same audit model is applied to universities and universities of applied sciences. The main objective of the audits is to support the higher education institutions in developing their quality systems to correspond to the European quality assurance principles<sup>2</sup> and to show that Finland has a viable and coherent system of quality assurance both at national level and in higher education institutions. The aim nationally is to collect and share good practices in quality management, ensure that they spread within higher education

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<sup>1</sup> The autonomy of the higher education institutions is also stated in the Universities Act (558/2009) and Polytechnics Act (564/2009).

<sup>2</sup> Standards and Guidelines for Quality Assurance in the European Higher Education Area. European Association for Quality Assurance in Higher Education. Helsinki: Multiprint. ([http://www.enqa.eu/pubs\\_esg.lasso](http://www.enqa.eu/pubs_esg.lasso)).

institutions, and improve higher education generally. The rationale for the audits is thus the enhancement-led approach, which has become a strong tradition in Finnish evaluation practice and which preserves the autonomy of the institutions involved.

The first round of audits took place at a time when Finnish higher education was undergoing many changes. The impact of the audits was therefore occasionally difficult to distinguish from the other changes taking place. However, both the feedback from the higher education institutions and the audit reports suggest that the audit process clearly accelerated the systematic development of quality systems, gave tools for the internal management of the institutions, and provided the institutions with many forms of guidance on how to develop their operations as a whole. The audits also enhanced the discussion on quality and improved interaction between the institutions and their stakeholders. This is important because systematic evaluation in higher education is also becoming increasingly important internationally.

The second round of audits began in 2012. The feedback received from the higher education institutions and other stakeholders and the analyses conducted by the FINHEEC provided the basis for the development and modification of the audit model. This second round puts greater emphasis on the importance of self-evaluation, and there are clearer guidelines in place for collecting the data. It is hoped that this will make the exercise more reliable and will facilitate the work of the institutions and the auditors themselves.

The audits of quality systems in the first round were carried out with reference to each higher education institution's own strategy. The institution decided on the quality system it needed to serve its own needs and goals and the audit assessed the purposefulness of the system in terms of its comprehensiveness, functionality and effectiveness. In the second round, this approach is being strengthened with an optional audit target. The institution chooses a function that is central to its strategy or profile and which the institution wants to develop in terms of its quality management. The optional audit target is not taken into account when evaluating whether the audit will pass, but it is mentioned in the audit certificate related to the quality label.

There is stronger emphasis on quality management of degree education in the second round audit model in which three samples of degree education are evaluated as independent audit targets. The institution selects two degree



programmes or other study entities leading to a degree and the audit team selects the third degree programme for the evaluation.

The audit of JAMK University of Applied Science is the first international audit conducted in English in the second round. On behalf of the Finnish Higher Education Evaluation Council, I would like to express my sincerest thanks to JAMK for taking part in the audit. My thanks also go to the auditors for their professionalism and commitment.

Professor *Riitta Pyykkö*

Chair, Finnish Higher Education Evaluation Council



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# Description of the audit process

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## 1.1 Audit targets

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The target of the audit is the quality system that JAMK University of Applied Sciences has developed based on its own needs and goals. The focus of the audit is on the procedures and processes that the institution uses to maintain, develop and enhance the quality of its operations. In accordance with the principle of enhancement-led evaluation, the higher education institution's (HEI) objectives, content of its activities or results are not evaluated in the audit. The aim is to help the HEI to identify strengths, good practices and areas in need of development in its own operations.

The FINHEEC audits evaluate whether the institution's quality system meets the national criteria (Appendix 1), and whether it corresponds to the Standards and Guidelines for Quality Assurance in the European Higher Education Area<sup>3</sup> (also known as ESG). Furthermore, the audit evaluates how well the quality system meets strategic and operations management needs, as well as the quality management of the HEI's basic duties and the extent to which it is comprehensive and effective. In addition, audits focus on evaluating the institution's quality policy, the development of the quality system, as well as how effective and dynamic an entity the system forms.

JAMK University of Applied Sciences chose "*Studies preparing for entrepreneurship and the promotion of innovation*

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<sup>3</sup> Standards and Guidelines for Quality Assurance in the European Higher Education Area is available at [www.enqa.eu/pubs\\_esg.lasso](http://www.enqa.eu/pubs_esg.lasso).

*work and entrepreneurship from the students' perspective*" as its optional audit target. As samples of degree education, JAMK chose the *Degree Programme in Logistics Engineering* (UAS Bachelor's) and the *Degree Programme in Entrepreneurship and Business Competence* (UAS Master's). As the third sample of degree education, the audit team chose the *Degree Programme in Business Administration* (UAS Bachelor's).

The audit targets of JAMK University of Applied Sciences:

1. The quality policy of the higher education institution
2. Strategic and operations management
3. Development of the quality system
4. Quality management of the higher education institution's basic duties:
  - a. Degree education<sup>4</sup>
  - b. Research, development and innovation activities (RDI), as well as artistic activities
  - c. The societal impact and regional development work<sup>5</sup>
  - d. Optional audit target: Studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students' perspective
5. Samples of degree education: degree programmes:
  - i. Degree Programme in Logistics Engineering (UAS Bachelor's)
  - ii. Degree Programme in Entrepreneurship and Business Competence (UAS Master's)
  - iii. Degree Programme in Business Administration (UAS Bachelor's)
6. The quality system as a whole.

A set of criteria that is based on a scale of four development stages of quality management (absent, emerging, developing and advanced) is employed in the audit. The development stages have been specified for each audit target and they are determined individually for each audit target. The optional audit target is not taken into account when evaluating whether the audit will pass.

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<sup>4</sup> Including first-cycle and second-cycle degrees. The first-cycle degrees include university of applied sciences degrees, while second-cycle degrees include university of applied sciences Master's degrees.

<sup>5</sup> Including social responsibility, continuing education, open university of applied sciences education, as well as paid-services education.

## 1.2 Implementation of the audit

The audit is based on the basic material and self-evaluation report submitted by JAMK University of Applied Sciences as well as an audit visit to the institution on 13–15 November 2012. The audit team had also access to electronic materials, which are essential in terms of the institution's quality management. The key phases of the audit process and the timetable are included as Appendix 2 of this report.

As chosen by JAMK, the audit was conducted in English by an international audit team. Prior to the appointment of the audit team, JAMK was given the opportunity to comment on the team's composition, especially from the perspective of disqualification.

The audit team:

Professor **Ellen Hazelkorn**, Dublin Institute  
of Technology (Chair)

Dr. **Attila Pausits**, Danube University of Krems  
(Vice-chair)

Vice-President Group Quality, **Osmo Härkönen**,  
Wärtsilä Corporation

President **Outi Kallioinen**, Lahti University of Applied  
Sciences

PhD candidate **Jens Jungblut**, University of Oslo

Chief Planning Officer **Sirpa Moitus**, FINHEEC, acted as a responsible project manager and secretary of the JAMK audit and Senior Advisor **Mirella Nordblad**, FINHEEC, as a backup for the project manager.

The audit visit to JAMK was conducted as a three-day visit. The purpose of the audit visit was to verify and supplement the observations made based on the audit material of the HEI's quality system. The programme of the visit is included as Appendix 3 of this report. The audit team drafted a report based on the material accumulated during the evaluation and on the analysis of that material. The audit report was written collaboratively by the audit team members and by drawing on the expertise of each team member. JAMK was given the opportunity to check the factual information in the report before the report was published.

# 2

## The organisation of JAMK University of Applied Sciences



The Finnish higher education system<sup>6</sup> consists of two complementary sectors: universities and universities of applied sciences<sup>7</sup> (UAS). The system of UASs is fairly new in Finland; the first UASs were made permanent in 1996. Universities conduct scientific research and education based on it, while the universities of applied sciences offer work-related education in response to labour market needs as well as conduct research and development (R&D) that supports education and regional development. Universities and UASs receive most of their funding from the Ministry of Education and Culture and the activities of the higher education institutions (HEIs) are governed by four-year performance agreements with the Ministry. The Ministry monitors the performance of the higher education institutions with the help of a public database called Vipunen.

At UASs, the Bachelor's degree consists of core and professional studies, optional studies, practical training, and a Bachelor's thesis. The degree is worth 210–270 ECTS credits and the duration is from 3.5–4.5 years. The compulsory on-the-job training period is equivalent to a minimum of 30 credits. UAS Master's degrees are professionally oriented, they

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<sup>6</sup> More information on the Finnish higher education system is available at the Ministry of Education and Culture's website [www.minedu.fi/OPM/Koulutus/?lang=en](http://www.minedu.fi/OPM/Koulutus/?lang=en).

<sup>7</sup> These institutions in Finland have adopted the term university of applied sciences (UAS), while the Ministry of Education and Culture uses the term of polytechnic. FINHEEC adheres to the term used by the institutions.



take 1–1.5 years to accomplish, and are worth 60–90 ECTS credits. To be eligible to apply for these programmes, you need to hold a Bachelor’s degree in a relevant field, followed by at least 3 years of work experience.

JAMK University of Applied Sciences Ltd. was established in 1994 to maintain JAMK University of Applied Sciences (JAMK)<sup>8</sup>. The operations started as a temporary trial which combined education from seven post-secondary level institutes. The University of Applied Sciences was made permanent in 1997 when also the Teacher Education College was affiliated to JAMK. The owners of JAMK are: the City of Jyväskylä (90%), Äänekoski Educational Consortium POKE (5%), and the City of Jämsä (5%). JAMK is a multidisciplinary university of applied sciences which operates on four campuses; three of which are located in Jyväskylä and one in Saarijärvi. As described in Figure 1 below, JAMK has four educational units and one administrative unit.

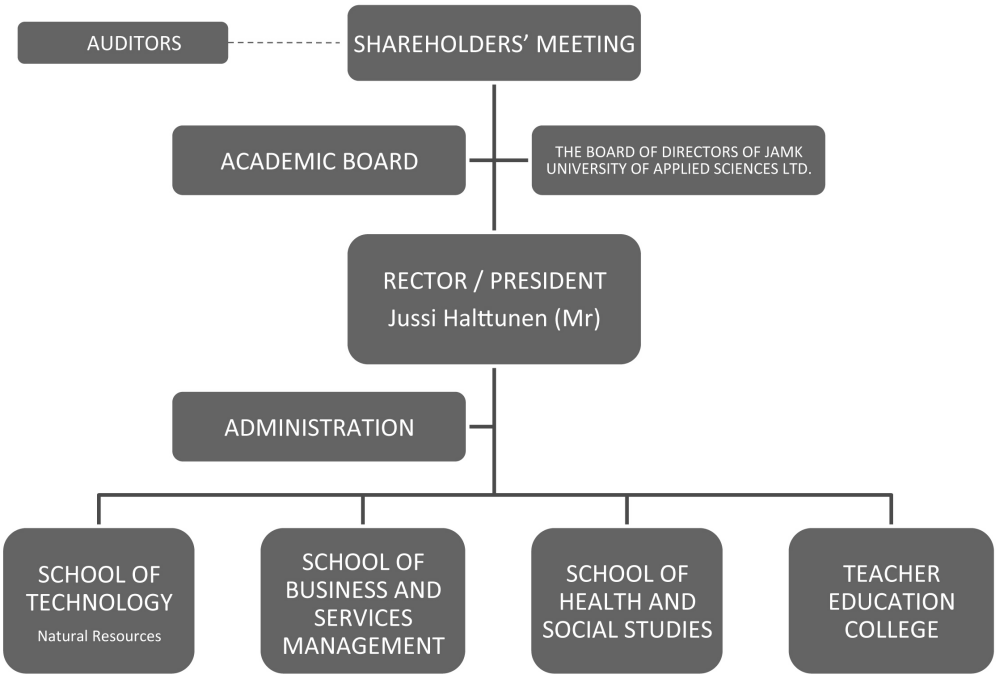


Figure 1. JAMK’s organisation chart. *Source: Basic material for the audit. JAMK University of Applied Sciences, 2012.*

<sup>8</sup> More information on JAMK is available at [www.jamk.fi](http://www.jamk.fi).

JAMK provides education in the following fields:

- Culture (School of Business and Services Management, School of Health and Social Studies)
- Social sciences, business and administration (School of Business and Services Management)
- Natural resources and the environment (School of Technology)
- Technology, communication and transport (School of Technology)
- Natural sciences (School of Business and Services Management)
- Social services, health and sport (School of Health and Social Studies)
- Tourism, catering and domestic services (School of Business and Services Management).

In addition, JAMK provides vocational teacher education (Teacher Education College). Within these fields, chargeable services and RDI activities that serve UAS education, support the working life and regional development, are realised. The number of students, graduates and staff are presented in the Table 1 below.

Table 1. Number of students and staff in JAMK University of Applied Sciences

<b>Students (FTE) *</b>	<b>Number</b>
UAS Bachelor's degree	4 898
UAS Master's degree	311
Vocational teacher education	454
<b>Degrees awarded **</b>	<b>Number</b>
UAS Bachelor's degree	1 038
UAS Master's degree	90
<b>Staff (FTE) *</b>	<b>Number</b>
Teaching and research staff	386
Other staff	258

\* Statistics of the Ministry of Education and Culture 2011

\*\* An average per year based on three years (2009–2011)

# The quality policy of JAMK University of Applied Sciences

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JAMK has a quality culture which is shared and well understood by all stakeholders. Quality policy objectives have been set and clearly defined by JAMK's senior management and discussed widely with staff, students and stakeholders. Since the first JAMK audit in 2006, the strategic goal-setting process has been inclusive and well-established. There is evidence that the distribution of responsibility related to quality management works reasonably well both at the institutional and unit-level. The management and key staff responsible for strategic and operative quality activities show commitment and capability. The documentation is well-organised, adequate and updated systematically and regularly; the information requirements of stakeholders have been taken into account. However, the roles of the JAMK Ltd. Board of Directors and the Academic Board in the quality system as well as JAMK's electronic information management systems should be developed further.

Quality policy of JAMK is at a **developing** stage.

## 3.1 Objectives of the quality system

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**Participative  
methods are  
used in the goal-  
setting process**

JAMK University of Applied Sciences has a well-established quality system with a long history. Ever since JAMK was formally licensed in 1997, JAMK management has recognised the importance of quality work and has started to develop a comprehensive strategy for quality management. The core of the quality system rests with the evaluation, feedback

and follow-up methods linked to operations management in addition to performance agreements between the Rector and the units which were established in the late 1990s. At the same time, JAMK has continually developed its quality system on the basis of internal and external feedback. The audit team was impressed at how systematically JAMK had utilised the feedback from its first audit in 2006. JAMK's willingness to further develop its quality system is shown by the fact that it is the first Finnish higher education institution that has chosen this second-round audit to be conducted in English by an international team.

JAMK defines the principles of its quality policy as follows: "JAMK considers quality management an essential tool for developing its activities. Quality management is a shared issue of the entire University of Applied Sciences: it is jointly implemented by the personnel, students, customers and partners. Quality management helps JAMK to reach its goals, and it promotes evaluation and continuous improvement of the quality of its activities and the innovativeness of the academic community. JAMK makes the quality of activities and achievements visible both to the academic community itself and its external stakeholders."

The main objective of the quality policy – to support and enhance the implementation of JAMK's strategy – has remained a consistent feature over the past ten years. However, since its 2006 audit, the interconnections between JAMK's strategic objectives and quality policy have been formalised and emphasised. As a consequence, the quality system now has the same objectives as JAMK's strategy. Likewise, the role of the quality management teams in pro-actively supporting innovation has been emphasised. JAMK's ambitious objectives are an integral vision from senior management to grass-root level.

The purpose of the quality management system is to support the mission, vision and values of JAMK and to promote implementation of JAMK strategy by

- Reinforcing the quality culture and skills of the academic community;
- Producing follow-up, feedback and evaluation information about the activities and results of JAMK;
- Ensuring continuous development of activities in all processes and at all operational levels.

JAMK's quality system consists of four elements: 1. Planning, 2. Action, 3. Follow-up and evaluation, and 4. Quality improvement. This division is based on W. E. Deming's cycle

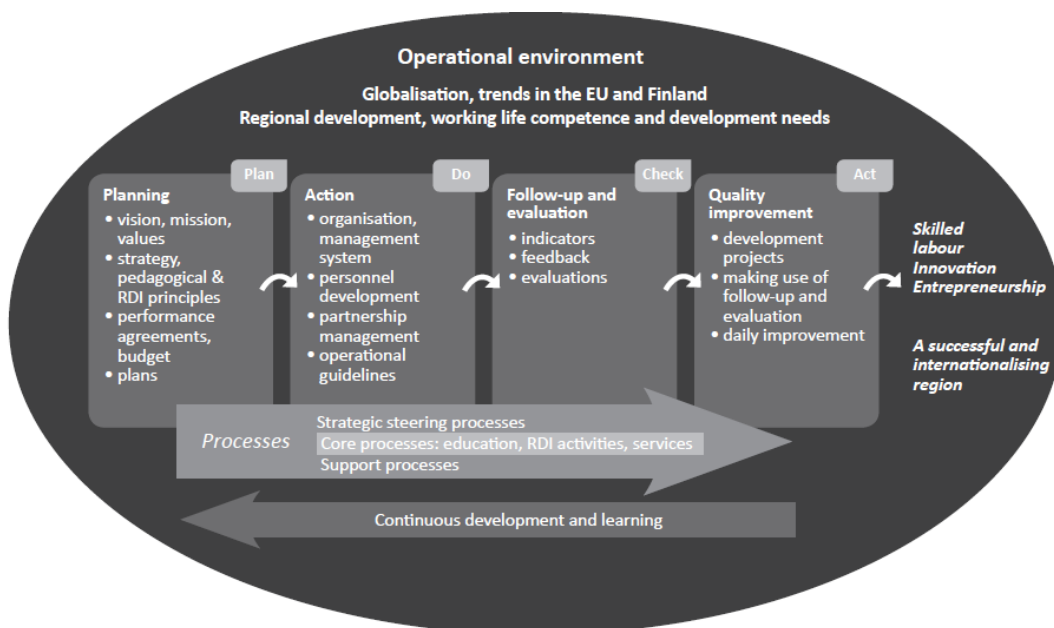


Figure 2. Quality system at JAMK. Source: JAMK Quality Manual, 2012.

"The principles and purpose of the quality management are clearly defined."

of continuous improvement (Plan-Do-Check-Act). JAMK's quality system, as depicted in Figure 2, illustrates how the quality system fully integrates its institutional strategic objectives with central operations in a coherent set of processes.

The principles and purpose of the quality management are clearly defined. Drawing on evidence from the audit material and on-site interviews, JAMK's quality system fulfils its purpose to enable continuous development and learning in an organisation on the basis of feedback received on activities and results. Staff and students have possibilities to influence on the quality policy as they are represented in the Quality Management Development Team and quality teams of the schools. Additionally, JAMK's strategic goal-setting process appears inclusive and functional. When preparing its Strategy 2015, JAMK used the Strategy Navigator-tool to involve students, staff and external stakeholders (including international partners) in helping define and refine JAMK's objectives.

### 3.2 Division of responsibility related to the quality system

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The responsibilities related to quality management are defined in two documents: *JAMK Quality Manual* and *JAMK Management System*. The Quality Manual includes three objectives related to responsibilities: 1. Persons responsible for quality make sure that the quality system works, 2. Activities are continuously improved by the personnel and students, and 3. Heads of Departments and management are models of excellence.

As defined in the *JAMK Management System*, JAMK Ltd. Board of Directors is responsible for the administration of the corporation, for proper organisation of its operations, and for organising and managing it in accordance with appropriate rules and regulations. As it should be, the role of the JAMK Ltd. Board of Directors is strongest in the planning phase of the quality cycle, deciding on the strategies and the strategic objectives. The interviewed representatives of JAMK Ltd. Board of Directors showed commitment to JAMK's quality system. However, as the quality system is so integral to the strategic framework and objectives, it is essential that the JAMK Ltd. Board of Directors displays a deeper appreciation of the importance that overall quality plays in JAMK's educational mission and its future sustainability and competitiveness, both nationally and internationally.

JAMK's internal administration is directed by the Academic Board and the Rector. According to the audit material, the primary task of the Academic Board is to develop the activities of JAMK, including its quality system. However, based on the interviews, the Academic Board would appear to be performing only basic procedural functions. Here too, there is an observable need to develop a deeper understanding of its role in monitoring and developing overall educational and academic quality. The process of curriculum development is discussed further in chapter 6.1.

JAMK has put special emphasis on ensuring that the quality system and responsibilities work at school and institutional level. The responsibilities have been defined for staff and students, managers and directors, as well as for the Quality Manager and Quality Officers and described very clearly in *JAMK Quality Manual*. Prior to this audit, Quality Management Development Team was divided into two: the small group consisting of the Quality Manager and Quality Officers discusses operative issues (Operational Quality

**The responsibilities related to the quality management work well at school and institutional level**

Management Development Team), and the large group complemented with management and Heads of Department representatives discusses strategic issues (Strategic Quality Management Development Team). Both teams have student representatives.

The audit interviews confirmed that the roles of the Rector, Vice-Rector and Quality Manager form the basis for the quality system and are realised as intended. The Quality Management Development Team and school quality teams also appear to have a relatively clear division of labour, with the different actors forming a coherent system with people committed to quality development and quality enhancement. Likewise, the interviews indicated JAMK staff members are working hard to embed quality improvement in their everyday activity. However, the roles of the Quality Manager and Quality Management Development Team with specific reference to the schools and management could be better clarified and strengthened; both the Quality Manual and interviews suggest some confusion as to how the matrix works in practice. Additionally, it remained unclear how JAMK systematically ensures that the Heads of Departments act as models of excellence.

"... the interviews indicated JAMK staff members are working hard to embed quality improvement in their everyday activity."

The people in charge of quality management demonstrated high capability. The key actors have participated in relevant quality training and have had evaluation experience previously. The Quality Officers reported they are encouraged to participate in such training as a part of their personal development discussions. In addition, the quality system is introduced to all new students, staff members and new members of JAMK Ltd. Board of Directors.

### 3.3 Documentation and communicativeness of the quality system

#### **JAMK's basic quality documentation is clearly structured**

JAMK's quality documentation architecture consists of three parts: 1. *JAMK Quality Manual*, 2. *JAMK Process Manual (TOKA)* and 3. *JAMK operational guides and forms, and Quality Guides of Schools*.

The *JAMK Quality Manual* provides a comprehensive and compact overview of JAMK's quality management procedures both in Finnish and in English. Prior to this current audit, it was distributed in print to all staff members and interested students. At the same time, the school-level quality manuals were updated and re-titled *Quality Guides of Schools* which

highlight the central role of the *JAMK Quality Manual*. The Quality Guides follow the same structure and the quality management procedures as JAMK's joint quality system but provide a deeper description of the school's organisation and the school-level process of handling the feedback where there are slight differences between the schools.

The Quality Manual is supplemented by the *JAMK Process Manual* (TOKA) which describes and defines processes most central from the viewpoint of operational control. According to the JAMK process map, processes consist of strategic steering processes, core processes (education, RDI activities, services) and support services. The structure of JAMK's processes is very functional and process descriptions are also regularly checked and updated. For each process, there is a process owner responsible for developing appropriate procedures and a manager responsible for approving it. The staff interviews confirmed that the Process Manual is widely used by different actors in the everyday processes. The high quality of the process descriptions were also noted by the recent EPAS accreditation<sup>9</sup> of JAMK Degree Programme in International Business.

Communication about the quality system to external stakeholders and possible applicants is conducted via JAMK's website ([www.jamk.fi](http://www.jamk.fi) > Facts and Figures > Quality) which provides a description of the quality system and central performance data. Otherwise, the communication happens in the context of implementation of the processes, e.g. stakeholder participation in the planning of education, traineeship implementation and RDI projects. Based on the interviews, stakeholders felt that JAMK's quality documentation and communication takes into account their specific needs.

JAMK's staff intranet, students' intranet and other electronic systems are central tools for documenting the quality system procedures and communicating its results to staff and students. At staff intranet, quality management is placed high in the main menu and the description of quality

**Particularly electronic communication should be made more user-centric**

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<sup>9</sup> The Bachelor's Degree Programme in International Business was awarded the EPAS accreditation in May 2012. EPAS is an international accreditation system operated by EFMD to evaluate the education in the field of business and/or management. The evaluation process considers programme delivery and design, outcomes, and quality assurance.



procedures follows the Plan-Do-Check-Act stages. Very importantly, there is a separate webpage for results which includes a summary of the information produced by JAMK's quality system: indicators, different feedback reports and internal and external evaluation reports. Most of these are currently available only in Finnish language. In the future, all the key documentation should be made available both in Finnish and English.

The documentation is not sufficiently user-centric and sometimes the national data is not as up-to-date as it should be in order to enhance strategic management and leadership. In the audit material JAMK has identified these as challenges. Additionally, in the self-evaluation report JAMK stated that the intranet is not reliable enough as a system for document management. Therefore, JAMK is beginning to use a document management system (Tweb) for storage of the latest result reports. A similar challenge relates to the availability of national indicator data (Vipunen) and feedback data (OPALA); due to the prolonged renewal of the national Vipunen database, JAMK says it has lacked sufficient comparison material. JAMK also indicated that the electronic student management system (ASIO) and the project management system (Reportronic) are not as compatible as they should be. Therefore, there is an urgent need for the renewal of JAMKs electronic information management systems.

The main forum for quality communication is the annual performance agreement process which flows from the individual level and to top management incorporating team development discussions. Overall, based on the audit material, the available performance data seems to be comprehensive and well documented but according to the interviews there is evidence that the amount of quality documentation is not fully used in steering operations.

"... the amount of quality documentation is not fully used in steering operations."

As to the communication processes, the audit team raised questions about the adequacy of the information flows between School Quality Officers, School Quality Teams, Quality Manager and Quality Development Team. In the answer, it became clear that JAMK relies too heavily on the distribution of Operational Quality Development Team meeting minutes to all staff members via JAMK intranet. The same is true with conclusions made on the basis of feedback or evaluations; these are usually recorded in the minutes e.g. of the Management Team, School Quality Teams or support services. This formal process can make it difficult to form a

full understanding of quality enhancement at different levels and in different processes. It would, therefore, be useful to identify additional methods or fora rather than relying on staff reading minutes on the intranet.

There is an evident need to improve the quality of communication, and utilisation of the quality documentation especially by middle management and staff. JAMK should identify better and more efficient ways to communicate the impact of the quality system. It is recommended that JAMK should consider alternative publishing formats, and to incorporate information about quality system more strategically in selected fora. The focus should now shift to ensuring well-documented information. In this regard, JAMK would benefit from systematic institutional research and analysis, and dissemination and discussion throughout the institution.

For students, the same difficulties apply – with documentation about quality issues being difficult to find. As a consequence, JAMK should prioritise efforts to improve the functionality and availability of quality communication to students throughout the entire study process. It should be organised in face-to-face meetings, orally, written, net-based etc. so that the students are continuously and actively involved and that they get a good understanding of their role in not only providing feedback but enhancing quality as active players.

Since the 2006 audit, JAMK has made significant effort to establish a quality culture which is both systematic and functional. It emphasises the values of responsibility, trust and creativity, as the foundation for a true and genuine quality culture to evolve. It has sought to develop a shared understanding of and commitment to quality throughout the organisation. In 2004–2011, JAMK conducted internal cross-evaluations of its all 43 degree programmes and about 300 staff members and students were trained as internal auditors. This meant a significant upgrading of quality awareness and evaluation competence amongst the staff and rooting a common quality culture. Clearly, JAMK management wants to promote the kind of quality culture whereby quality management is understood by everyone as a tool for continuous and systematic improvement of one's own work and collaboration.

JAMK has set very ambitious goals for itself; it is therefore vital that it can establish meaningful communication channels

"... JAMK would benefit from systematic institutional research and analysis, and dissemination and discussion throughout the institution."

**JAMK has a constituted quality culture which is based on JAMK's values**

that give voice to critical ideas and can engage the JAMK community in active discussion. This is vital so that JAMK staff and students can commit themselves to the JAMK vision, objectives and quality system. The OTA KOPPI – CATCH (Clarify what matters, Aim higher, Think outside the box, Clear out the cobwebs, Have fun) slogan is a good practice for communicating quality principles to staff and students. The idea emphasises action and commitment in accordance with JAMK values, agility and collaboration.

Because embedding a quality culture is a complex process, JAMK recognises that quality is not improved by simply increasing control but by increasing understanding of the importance to act according to mutual agreements and quality procedures. A genuine quality culture cannot be built by tightening control but rather by empowering staff in the practical implementation of quality management. Thus, JAMK's big challenge for the future, recognised by its self-evaluation, is to "draw up a more specific definition for the notion of quality at JAMK".

# 4

## Strategic and operations management

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JAMK's vision is to be the best university of applied sciences in Finland with a strong track record in quality of education, internationalisation and promotion of entrepreneurship. Its quality system, with its PDCA-model, is aligned to strategic planning, management and steering of operations; it informs procedures and processes, and generates data required for decision making, development and monitoring implementation and evaluation. Strategic planning is organised in a systematic and structured way. To enhance operational coherence, the Process Manual specifies precise steps to be followed at each juncture. Quality information is utilised at different levels throughout the organisation. However, given these ambitious objectives, JAMK should consider how the quality system can develop beyond procedural actions. Greater attention should be given to how the quality system can ensure achievement of that target, how it monitors attainment, and most importantly, how it identifies stretch targets which are more appropriate for an institution seeking an international focus.

The link between the quality system and strategic and operations management of JAMK is at a **developing** stage.

### 4.1 Linkage of the quality system with strategic and operations management

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JAMK's quality system is closely linked to strategic operations management across four main elements: 1. Plan, 2. Do, 3. Check and 4. Act (PDCA). Figure 3 shows the most important steps in strategic and operations management.

**The quality management serves efficiently strategic and operations management**

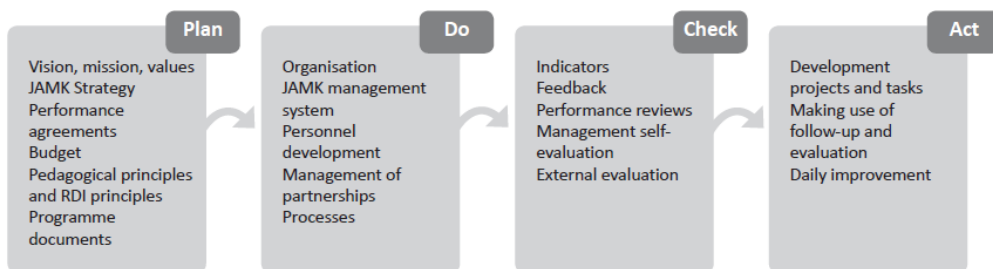


Figure 3. The most important operating methods in the quality management applied in strategic and operations management. *Source: Self-evaluation of the Quality System at JAMK University of Applied Sciences, 2012.*

Based on feedback from the previous audit, JAMK has simplified its strategic framework. There is now a clearer institutional strategy, complemented by separate objectives for pedagogy, RDI activities and ethical issues, and service units (for example, HR). This defines the mission, vision and values, including the essential definitions of the profiles and strategic focus areas and their development. This approach ensures a single coherent strategy, with the necessary programme level documents, which in turns makes it easier to manage implementation at all levels of the organisation. The Balanced Scorecard has also been modified to better measure strategic change. The Process Manual describes the strategically most important steps, with special emphasis on those aspects where staff members cooperate closely with each other. This is in keeping with JAMK's efforts to enhance the user-friendliness of the process descriptions, and integrating more detailed operational guidelines.

The JAMK strategy, performance agreement and budget form the core elements and central documents for the management. The agreement between the Ministry of Education and Culture and JAMK are translated into unit-level goals and activities in performance agreements agreed between the Rector and individual schools/administrative units. The entire personnel of JAMK participate in this process, which takes about 2–3 months, ensuring the whole quality process works in a structured and balanced way. First, team development discussions are organised. Then, individual development discussions take place between the manager and staff member about the personal performance objectives and development needs (including training) in light of JAMK and school-level objectives in the performance agreement. Institutional understanding of strategic implementation is informed by the team discussions and EFQM-based self-

evaluations. The results of these two rounds are summarised at school-level and then discussed at a joint seminar. The team development meetings are an example of good practice as it helps unify the system providing a feedback loop to the quality system by building a common quality culture and communicating strategic objectives.

Review processes of education and performance together with the indicators, feedback and evaluations form the central information for steering the core processes and providing objective information on the essential developmental needs of the operations. The education performance review is conducted three times a year and the RDI portfolio review four times a year. The management self-evaluations (EFQM) are the tools for recognising the most important developmental targets of the whole organisation and the units. Recently, JAMK set up “checkpoints” for the collection of performance data; these include annual discussions on results, management self-evaluations, and performance reviews. Additionally, every other year, stakeholder groups are asked to comment on JAMK’s performance.

JAMK has developed an extensive feedback system. The purpose of the present follow-up and evaluation procedures is to ensure that all the parties participate sufficiently in quality management. For example, the JAMK Ltd Board of Directors and the Academic Board each play a part in helping set objectives and discuss the follow-up data as well as development measures. If the results of BSC are poor, the Academic Board discusses the educational task and the need to change curricula or study guides. From the interviews it became clear that the primary role of the JAMK Ltd Board of Directors is in strategic oversight; it reviews quality information twice or three times a year. The Board discusses evaluations and the next steps, but it does not interfere with operational matters.

The circle of quality improvement involves three different approaches at different levels:

1. Development of the whole UAS or its units in the form of a project;
2. Utilisation of the follow-up and evaluation information in a predefined form; and
3. Improvements in the daily actions concerning all the staff members and students.

The quality system and the information it produces serves effectively strategic and operations management and there is evidence that the feedback information is put to use.

“The team development meetings are an example of good practice as it helps unify the system providing a feedback loop to the quality system...”

Since 2011, quality improvement has been realised primarily as strategic development projects and smaller development tasks which are based on follow-up material and decisions drawn from them. Quality information is utilised at different levels throughout the organisation. The essential ways to utilise the information on follow-up and evaluation include personnel and team development discussions, quality team meetings and management team meetings. Documentation decisions, objectives, timelines, responsibilities and follow-up are vital for continuous improvement. Accordingly, JAMK has identified this challenge and started to develop a portfolio-based approach for development projects and monitoring the results.

**Current indicators  
could be developed  
to strengthen JAMK's  
specific mission**

JAMK's strategic objectives are based upon those stated and agreed with the Ministry of Education and Culture which in turn forms the basis of its performance agreement drawn up through a process of negotiation. This has helped provide strategic coherence for quality management and links the quality system with the strategy in a meaningful way; it also avoids having too many indicators. Following this approach, JAMK has received good performance results, for which the Ministry of Education and Culture has allocated additional funding; it has also been successful in the FINHEEC selection of Centres Excellence in Education.

However, JAMK has only set a few quality objectives beyond those agreed with the Ministry despite its ambitious strategic vision. It would therefore make sense for JAMK to go further – to develop the quality system better aligned with its strategic objectives. JAMK should develop systematic forecasting capacity to gain a better understanding of future trends which are likely to impact and influence JAMK, and its educational mission and all degree programmes; this should develop a capability beyond that which may be gained through discussions with stakeholders about working life developments.

Likewise, JAMK should consider revising its indicators and consider adding additional stretch targets (quantitative and qualitative). These should seek to strengthen and serve JAMK's specific mission e.g. the regional strategic objectives, internationalisation and entrepreneurship, in addition to helping JAMK meet its strategic ambitions. Finally, JAMK might consider reviewing the quantum of quality processes, which still appear very bureaucratic. It is recommended that JAMK analyse this part of its quality system and come up

with somewhat lighter solutions concerning the follow-up procedures. Less, but strategically more appropriate and useful information, could be one of the solutions.

## 4.2 Functioning of the quality system at different organisational levels

JAMK has identified a clear division of labour in the functioning and effectiveness of its quality system in terms of management at different levels within the organisation:

- Top management (Rector, Vice Rector, Director of Administration, the JAMK Ltd Board of Directors, JAMK Academic Board, JAMK Management Team)
- Management of the units (School Directors and management teams, in the Administrative Unit Vice Rector and Director of Administration including team meetings of Support Services Managers) and
- Management of departments (Heads of Departments and RDI Managers).

The JAMK Ltd Board of Directors, the Academic Board and JAMK Management Team have an important role and responsibility within the quality system. The top management demonstrates its full commitment, and work well to link the strategic framework and quality system in a functional and purposeful way in order to achieve JAMK's vision. The various unit directors and Heads of Department also display a strong awareness of the basic structures of the quality system, and commitment to manage quality. Support for strategic and operational management, follow-up and evaluation processes should be regarded as strengths.

However, the PDCA-model produces a considerable amount of information; in addition, some Heads of Department have introduced additional procedures turning out further information. This places a great responsibility on individual directors and heads to fully interpret, disseminate and act upon the information. To ensure greater efficiency and productivity, consideration should be given to what data is required and how it should be gathered so as to reduce the totality and the additional work. Developmental measures should also be better prioritised, at all organisational levels, to ensure better implementation and hence enhanced results, despite the resources and the excessive workload. As the self-evaluation report states, this is a challenge for JAMK.

**The management at different levels showed strong commitment to the quality system**



"As a recommendation, the future forecasting component of strategic planning, as part of the quality system, should be further systematised and documented..."

In defining and implementing the improvement measures for strategic and operations management, there should be more clarity and follow-up as well as a better streamlined management system. To some extent there is also a need for more powerful leadership in managing improvement activities in a more determined way as well as putting effort on follow-up. As a recommendation, the future forecasting component of strategic planning, as part of the quality system, should be further systematised and documented in order to catch the weak signals of the operational environment and of the national and international context.

# 5

## Development of the quality system

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JAMK has well-established and systematic procedures for evaluating and developing its quality system. The development of the quality system is embedded in the school-level performance agreements and development measures are agreed annually. After the 2006 audit, JAMK has significantly improved the functionality of its quality system. Its procedures enable it to efficiently identify the system's strengths and those areas which require further attention and development as a result of the self-evaluation report. There is clear evidence of a feedback loop, embracing the external audits, cross-evaluations, EFQM self-evaluations, benchmarking and their follow-up measures, to successfully support the development of JAMK's quality system. The next challenge relates to strengthening the international standpoint in the development of the quality system.

Development of the quality system is at an **advanced** stage.

### 5.1 Procedures for developing the quality system

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According to JAMK's Quality Manual, the objective of developing the quality system is to cultivate a dynamic and comprehensive quality system that covers all the basic duties of the institution, supports JAMK's strategy in an appropriate and helpful manner, and sustains the development of JAMK's activities. The development process of the quality system has been defined and included in JAMK's Process Manual.

In its self-evaluation report, JAMK stated that the capacity of the quality system to meet its objectives can be reflected

**JAMK has systematic procedures for evaluating and developing the quality system**

in how well the procedures of quality management have been able to support the realisation of the JAMK mission, vision and strategy. Based on JAMK's results and success in the national performance- and competitive-based funding granted, JAMK finds that the quality system effectively meets its requirements. The audit interviews confirmed that the development of the quality system and procedures support continuous improvement, facilitating the sharing of good practices, and unifying the various processes and learning throughout the JAMK organisation. Two unique quality tools, biannual student feedback weeks (called the Grumble weeks) organised by the JAMKO student organisation and the cross-evaluations of all degree programmes, have significantly enhanced grass-root staff and student participation in quality management and supported dissemination of good practices between the degree programmes, and across the entire institution.

Quality management development is discussed in the JAMK Management Team twice a year. In the spring, the Management Team discusses the most important data produced by the quality system. This information is used for JAMK strategy implementation at a more detailed level and for setting the development targets for performance agreements. Fulfilment of set targets is followed up using the Balanced Scorecard (BSC). The system is working at JAMK management and school-level systematically and the functioning of the performance indicators are followed regularly. An electronic feedback channel, on the performance agreement tool, is open to every staff member. There was also evidence that the performance agreement procedure, BSC indicators and process descriptions have been developed on the basis of both internal and external feedback.

The school-level development measures of the quality system are agreed annually and embedded in the performance agreements between the Rector and the schools. For instance, in 2012, they included follow-up of FINHEEC RDI evaluation and JAMK cross-evaluations and preparation for field-specific accreditations.

The development and the deployment of the quality system are led by the Operational Quality Management Development Team together with the School Quality Officers. Changes in the quality system are recorded in the memorandums of the School Quality Teams, Quality Management Team and JAMK Management Team which can, however, make it difficult for students, staff and stakeholders

to identify the impact of their feedback. Nonetheless, the interviews showed that if there are changes in the quality system, they are widely communicated e.g. by the Quality Manager. For instance, the JAMK Ltd. Board of Directors felt that it had been properly informed of the changes in the performance agreement and strategy structure.

The EFQM self-evaluation is the most commonly used tool in developing the quality system and it is conducted periodically for all the functions and units of JAMK. It consists of three parts: self-evaluation workshops, staff survey, and a strategic review carried out by the management. Based on the evaluation findings, a development plan is prepared and approved. The last self-evaluation was conducted in 2011; it was used extensively as the underpinning material for this audit.

An external audit of the quality system is carried out at JAMK every six years. In addition, JAMK performs a self-assessment on its quality system approximately three years after the external audit in order to further develop the system. Internal audits are normally performed to verify that the agreed quality system changes are followed by the different units of JAMK. The schools performed the last internal audits in spring 2011 after the completion of the update of the quality system. As an example of good practice, the action plans based on the audit and evaluation results are prepared and the actions are followed by maintenance books indicating the owner, schedule and actions taken in the subject. This follow-up system makes development transparent. More attention should be given to ensuring that everyone at JAMK has easy access to this documentation.

"As an example of good practice, the action plans based on the audit and evaluation results are prepared and the actions are followed by maintenance books..."

## 5.2 Development stages of the quality system

Ever since its establishment and granting of its formal operating licence in 1997, JAMK management has recognised the importance of quality and the necessity to form a common quality strategy shared by all the schools. The former school-based approach to quality stemmed from JAMK's predecessor post-secondary institutes; for instance, the School of Engineering and Technology had previously secured an ISO 9001 certificate.

Execution of a shared quality strategy required creating a quality management organisation and common framework for the realisation of quality work. In 1998, the quality and

**There is continuous evidence of successful development of JAMK's quality system**

evaluation team was set up, and by 2000, the follow-up, evaluation and feedback tools were created and linked with the operations management and performance agreements between the Rector and the units. In 2002, a full-time Quality Manager was appointed and the first Process Manual was published. According to the JAMK self-evaluation, preparing for the first JAMK audit in 2006 contributed significantly to the concretisation of quality management processes.

The feedback received from the first external audit of JAMK in 2006 was considered by JAMK's strategy group and closely linked to the development of JAMK's operational management as a part of the organisational reform in 2008–2009. As a result, the quality system was simplified and made more efficient by developing JAMK's shared operating methods and abandoning the separate ISO 9001 certification due to its limited utility. JAMK's strategy structure was renewed, BSC indicators were significantly lightened and the performance agreement document was more closely linked to the strategy implementation. The process descriptions were fully renewed and their number was reduced. Joint structures were adopted e.g. for curriculum planning, individual staff development discussions and the RDI project planning. Overall, the utilisation of external audit feedback has been very systematic and well-connected to JAMK's strategic development work. It concentrated, not only on the development of individual tools, but developing the quality system as a whole. Development has covered almost all the given recommendations except for the data systems, the problems of which were partly independent of JAMK's actions.

JAMK prepared the self-evaluation report for this current audit in spring 2012. The self-evaluation reflects JAMK's high ability to identify the strengths and weaknesses of the quality system. JAMK's self-evaluation included a number of very relevant development ideas which JAMK could prioritise and put into practice.

**Strengthening the international standpoint as a future challenge**

In its self-evaluation report, JAMK identified that strengthening its international standpoint is the next challenge related to the development of its quality system. Following this analysis, the next stage and focus of the development of the quality system should turn from the system and process development to developing the quality of its educational provision, especially from the international perspective. For this purpose, JAMK should systematically

perform external benchmarking, engage in systematic comparison of its activities with those of other higher education institutions, and consider, where appropriate, accreditation of degree programmes with well-recognised and appropriate peer strategic partners. These feedback mechanisms should be embedded within the PDCA cycles of core processes of education and RDI activities. At the same time, constant attention should be paid to the workload created by the quality system.

The need for this new approach has partly been recognised by JAMK. The recent external benchmarking and accreditation projects identified during this audit included utilising JAMK's U-Map profile; EPAS accreditation of the Degree Programme in International Business; benchmarking the Bachelor's Degree Programme in Mechanical Engineering with Esslingen University of Applied Sciences; benchmarking of the Degree Programme in Entrepreneurship and Business Competence in the Microeconomics of Competitiveness Harvard, PRME and EFMD networks and benchmarking project on entrepreneurship. Additionally, JAMK plans that some of its programmes in the field of technology will take part in the EUR-ACE accreditations once the Finnish Higher Education Evaluation Council (FINHEEC) has been awarded the accreditation powers by the European EUR-ACE office.

Based on the interviews, benchmarking was sometimes understood as degree programme comparisons made by individual teachers or students participating in exchange programmes. However, benchmarking should be understood as systematic comparison with a peer set of institutions or programmes, the objective of which is to understand and evaluate the "best educational practice" in the field of study; this is particularly important to ensure that the quality of educational provision – across teaching, RDI and entrepreneurship – is internationally robust. Based on these benchmarking results JAMK might review the targets for each programme. Furthermore, the lessons learned in different field-specific accreditations and benchmarking projects should be followed up and made visible at JAMK-level and utilised across all programmes, as appropriate.

"... JAMK should systematically perform external benchmarking..."

# Quality management of JAMK's basic duties

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## 6.1 Degree education

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The quality management procedures in degree education are functioning well and show evidence of continuous development of JAMK's operation and implementation of pedagogical principles. The student, graduate and stakeholder feedback systems, in addition to the performance indicators and cross-evaluations, generate relevant information which is systematically used in the further development of the degree programmes. However, more attention should be given to the academic quality of the programmes and to ensuring coherent usage of tools like the Personal Learning Plan. The educational leadership needs further analysis. Additionally, student participation should be encouraged in different ways in order to raise the feedback rate.

The quality management of degree education is on a **developing** stage.

### **The planning of degree education supports the implementation of JAMK's strategy**

The planning of degree programmes is based on JAMK's strategy and the delivery follows appropriate pedagogical principles. The quality of learning is one of JAMK's three core strategic priorities. Innovative learning is enshrined in the institution's focus areas. For JAMK, the quality of education manifests itself in satisfied customers, efficient learning possibilities and in working life reforming expertise. As indicators for this, JAMK uses the percentage of employed students at the stage of graduation, the student feedback received from the national OPALA student feedback system both measuring customer satisfaction, the percentage of Bachelor's degree students completing at least 55 credits

during one year measuring efficient learning possibilities and the number of completed degrees measuring working life reforming expertise.

According to JAMK's pedagogical principles, i.e. pedagogic strategy, the objective is to create a supportive learning environment that facilitates the acquisition of expert knowledge. The main actor in the learning process is the student who is supposed to be an active player in his own learning process. Furthermore, curricula are supposed to be based on expertise, validated by the working life and delivered through structures that allow flexible studies.

At JAMK, the principles guiding RDI work are also connected with the planning of degree education to ensure a connection between teaching and RDI activities. Additionally, internationalisation and entrepreneurship are supposed to be mainstreamed in the curricula. The integration of entrepreneurship as one of JAMK's core strategic goals will be addressed in chapter 7 of this report.

The quality management of education systematically follows the Plan-Do-Check-Act cycle (PDCA) and is realised through versatile tools: school-level performance agreements, curricula, students' Personal Learning Plans (PLPs), JAMK-level process descriptions for educational core processes, different guidelines, feedback, evaluation and follow-up mechanisms and the following development measures.

As a follow-up of the previous audit in 2006, JAMK emphasised the learning aspect in its curricula by adopting competence and learning based approach in all the curricula of the degree programme and harmonising the assessment criteria for courses and thesis works. Furthermore, JAMK now has a shared structure for curricula to be used by all the degree programmes. Generally, the curriculum development follows a five year cycle with smaller revisions being made on a yearly basis. In 2012–2013, JAMK will renew all its curricula as a part of the transition to the new educational structure.

The process of ensuring the learning outcomes approach is in place. It is the task of the Educational Development Manager and his staff to ensure that the principles of the European Higher Education Area (EHEA), the European and National Qualifications Frameworks<sup>10</sup> (EQF and NQF) are

**The curriculum planning and all curricula are based on learning outcomes approach**

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<sup>10</sup>A proposal for National Qualifications Framework (NQF) is currently in process in the Finnish Parliament. However, many higher education institutions, including JAMK, have already adopted the proposed NQF.



reflected in the curricula and provide a common framework for each new programme. The final curriculum is checked against these standards. If the curriculum, at the end of the process, does not meet the respective prerequisites, the Development Manager can send it back to the department to be amended. The process of curriculum development at JAMK is presented in Figure 4 below.

Ensuring the working life relevance of the curricula and involvement of the external stakeholders in the curriculum design process is steered by each school/department separately but this generally functions well. Based on the audit material and interviews, the feedback from external stakeholders and students is very important and utilised in the curriculum design. Stakeholders also seemed satisfied with their involvement and the result of the educational process. The sample degree programmes also had included the future forecasting element in the curriculum planning. JAMK should ensure that there is a systematic forecasting approach in the curriculum planning as discussed earlier in chapter 4.1. In addition, the good practices related to the stakeholder involvement should be disseminated and made consistent across all degree programmes.

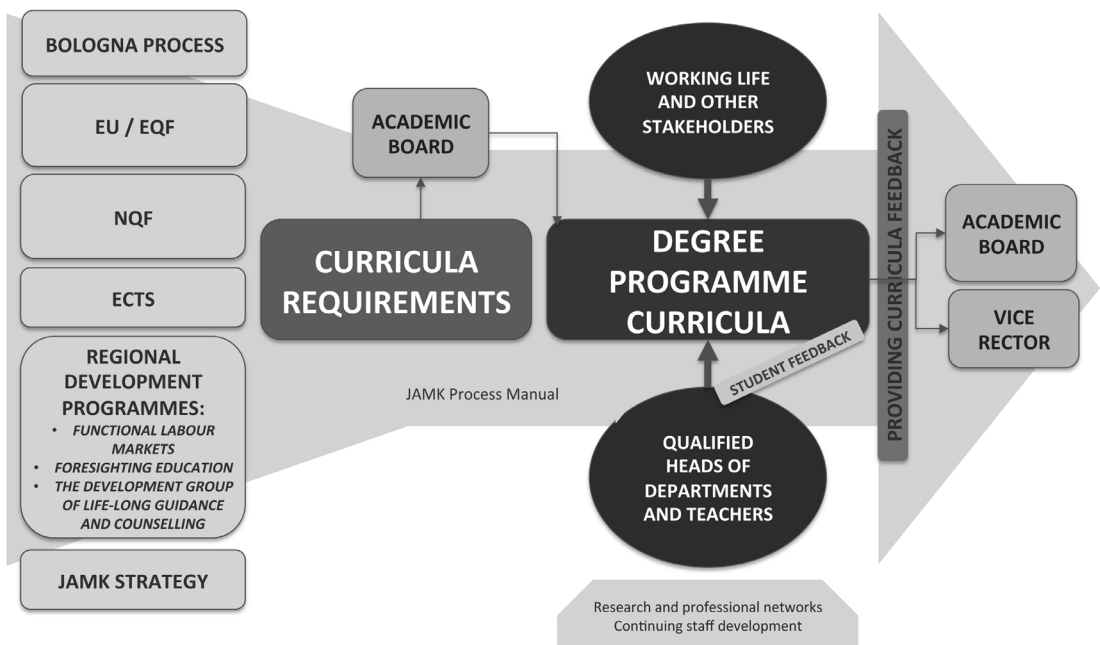


Figure 4. The process of curriculum development at JAMK. *Source: JAMK 2012.*

While the working life orientation of the curricula is functioning well, the process of assuring academic quality in curricula should be addressed. While each teacher or a group of teachers (expert teams) are responsible for the course description of his or her own course, the Head of Department bears the responsibility for the overall programme. When a new curriculum is created, there is a high level of trust in teachers' expertise but no general procedure for getting peer feedback on the content and quality of the curriculum from outside of JAMK. The recent EPAS accreditation paid attention to the same issue, and as a result, the School of Business and Services Management established an Academic Board at the school-level with the aim to better institutionalise the feedback process of the internal teachers. If JAMK wants to measure itself on a European level, it is strongly recommended that it engage in benchmarking the academic content of its curricula on this level. One way of doing this would be to include in the creation of each new degree programme a group of international peers that comments and assesses the curriculum. This could be done by involving international peers as members of an advisory board or as part of another systematic process, such as peer review of curricula, examination, research papers, etc.

**Assuring the academic quality in curricula – an area in need of development**

The Personal Learning Plan (PLP), which is intended to give students the possibility to personally shape their curriculum according to their interests and needs, is a tool available to all students at JAMK. The PLP is supposed to be completed during the first semester and revised throughout the studies with the help of JAMK's teachers. Several interviewed students expressed very positive views about the co-creation of the PLP with their tutor teachers and general availability of support. However, particularly some students in adult education said they had not completed their PLP even in their second year of study. To improve the effectiveness of the PLP and to ensure a coherent support of all students it would be advisable to ensure every student completes his/her PLP during the first semester, so he/she can take maximum advantage from this tool.

**The coherent use of the Personal Learning Plan and Recognition of Prior Learning needs to be ensured**

JAMK has established a procedure for the Recognition and Accreditation of Prior Learning (RPL). According to the interviewed students, RPL is included in the process of designing the PLP with the tutor teacher. However, it seems to partly depend on the individual tutor teacher whether he/she is knowledgeable about RPL and/or informs students

about this possibility. Students reported they sometimes had to undertake additional examinations to improve their qualifications and in some cases not all credits were recognised. To ensure a common quality experience for all students it would be important to inform all students about RPL from the outset, and to formulate transparent regulations concerning recognition to ensure that all the knowledge a student brings to a degree programme is appropriately valued.

**A common pedagogical approach could be clarified**

After the 2006 audit, JAMK allocated additional resources to the pedagogical development by establishing a post of Educational Development Manager. In addition, the Teacher Education College offers pedagogical training in the institution related e.g. to curriculum, evaluation and counselling. However, it still seems that the support from the Teacher Education College is used only partially by some departments and the pedagogical concept is partly understood only in a technical oriented manner. It also seems that the discussion around the pedagogical principles mainly happens on the level of degree programmes or schools. There seems to be a lack of institution-wide discussions on the principles of teaching which may lead to a fragmented implementation of the principles across the different schools. A more widespread use of the competences of the Teacher Education College would be helpful to align the overall pedagogical quality of JAMK. Overall, the educational leadership needs further analysis. It would be valuable to further clarify a common pedagogical approach and its implications e.g. to the teaching culture, student role and development of the learning environment.

All the interviewed students said they are well-informed of the intended learning outcomes and assessment criteria. Although the learning-outcomes based curricula are now in place, the student assessment methods still seem to be quite traditional. Further attention should be paid on the development of competence-based assessment methods. Additionally, in order to support the student being an active player in his own learning process, more systematic methods should be developed and applied to support students to assess their own learning.

As discussed further in 6.3, the link between degree education and RDI activities seems to be mainly based on the thesis work of the students. Development of student RDI competences is handled by each of the schools, but this also leads to some unevenness. At the Bachelor's level, each

programme has 10–15 ECTS of research training additional to the 15 ECTS of the Bachelor's thesis. At the Master's level, programmes have more research training credits, but here also the content is based on the academic unit or school; JAMK has a standardised 5 ECTS methods course for all Master's degree programmes.

Besides the work carried out by the advisory boards, the professional growth embedded in the degree requirements is ensured by guidance and traineeship reports related to students' project works and practical training and thesis guidance. Some degree programmes conduct their own alumni surveys in addition to JAMK's joint graduate employment survey. The involvement of visiting lecturers from working life was mentioned by both students and stakeholders as a way to positively influence the connection between the teaching and the preparation for a job. However, based on a few critical comments by adult education students, it would be good to provide sufficient pedagogical training for all visiting lecturers.

Internationalisation is a key objective for JAMK, and it was discussed at various times through the audit team's visit. It includes supporting and developing the processes of international student and staff mobility, developing international partnerships, supporting internationalisation at home but also provision of JAMK services and development activity to an external market. The latter is included within the category of chargeable services. Involvement at the programme levels varies which probably reflects the extent to which the programme is attractive to international students. The international students spoke of a welcoming environment and a well-managed orientation process to JAMK and UAS studies. However, as JAMK expands this activity it will need to develop a deeper understanding and knowledge of internationalisation and the appropriate quality processes and guidelines. This is especially important as international education, and especially programmes developed and operating outside the country, can be prone to difficulties. At the same time, JAMK needs to ensure that its own international students are well integrated into the JAMK community, and that they are well supported by all JAMK units. Finally, JAMK has identified a list of its most important partnerships, at home and abroad: a) interest groups in society, b) customers, and c) international cooperation partners. This would be a good time for JAMK to review its partnerships, consider which ones make the most sense, and then establish

"The international students spoke of a welcoming environment and a well-managed orientation process to JAMK and UAS studies."

the appropriate quality system to support them in order to help build and maintain its reputation. Ultimately, JAMK will succeed on the basis of the quality of its educational programmes and the learning environment in an international marketplace.

JAMK offers possibilities for full-time and part-time degree studies in the form of youth education and adult education,<sup>11</sup> as well as open and continuous education. The interviews showed that the overall student experience at JAMK was very positive which obviously signals the continuous development of study processes. However, interviews particularly with students of the Bachelor's Degree Programme in Business Administration showed that the study experience of young education and adult education students differs to some extent. In addition to the above mentioned issue with PLP's, students in adult education mentioned their access to student services is harder due to their evening time of study. It is recommended that JAMK identifies not only the needs of students in youth education but also the specific needs of adult education students. This would encompass ensuring the availability of learning independent from opening hours and providing students with sufficient e-learning possibilities. It is also important to ensure student services are available for these students, perhaps once a week in the evenings. This should also include access to the cafeteria.

**Support services  
function well but their  
external feedback tools  
should be systematised**

JAMK offers a diverse set of support services consisting of HR services, library, quality management, marketing, financial services, data administration, facility services, student services, educational development services and international services. All support services for degree programmes are available at a central level and some of them also in a decentralised manner at the schools and their campuses. The support services serve both students and staff, and the respective heads of a service report to different persons in the organisational hierarchy. Based on the comments of the teaching staff and the students,

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<sup>11</sup> The terms 'youth education' and 'adult education' are used in the Finnish UASs. The main difference between these two forms of education is the mode of study. In adult education, students have the possibility to work besides their studies due to the flexible multimodal teaching and learning approach. Prior learning and work experience are often accredited towards the degree. Adult students can also apply to youth education.

the services generally work well even for those staff and students working at the outside campus in Saarijärvi.

The quality management of support services is embedded in JAMK's quality system and consists of staff and student surveys and benchmarking projects each year or every two years. The latest benchmarking projects of support services were realised in years 2005–2009. The self-evaluation report stated that the JAMK-level support services function well in degree programmes. In particular the library services received very positive feedback both from staff and students. This was backed up by the results of the annual staff survey in 2011, which also named the library, human resources, student services and financial services as the most positive support services.

Although JAMK has previously reviewed its support services, based on the interview with the support service staff, JAMK should consider ways to benchmark and strengthen the overall quality management and provision of its support services. Currently, each service has its own way of processing the data delivered by the surveys and, since they all report to different superiors in the organisational chain of command, there is no common umbrella directly overlooking all the services. Even though some of support service staff indicated they use their professional networks to cross-check their activities, there is no systematic process that gathers external feedback on the services except for the above mentioned elapsed benchmarkings. Thus, it would be advisable to use systematic quality tools such as for example regular benchmarking or staff exchange and learning programmes.

It is the responsibility of the Heads of Department to ensure the quality of the degree programmes. The student feedback on degree programmes consists of course feedback on courses selected by the Head of Department, student feedback after the first six months of study, student feedback after two years of study, feedback at the time of graduation and graduate employment surveys. The course feedback is collected regularly from the courses selected by the Head of Department. The results are processed by the teachers of the course and the Head of Department and available for the Quality Officer, the Quality Manager and JAMK's top management. JAMK has defined a so-called alarm level: if the general feedback of a course is 2.5 or below on a 4 point scale, then teachers have to discuss with their superiors. However, a general problem with student feedback seems to be the rather low response rate, often below 50% and sometimes even below 30%.

**Students as active players in the quality system should be encouraged**

"... the interviewed students felt that they have good possibilities to influence, but on the other hand, not all students use this possibility to full extent."

The students have, in principle, excellent possibilities to participate in JAMK's quality management. According to JAMK's Quality Manual, students have an active role to "take part in learning process development and continuous improvement of quality in compliance with the quality system". Students have representatives in different JAMK-level bodies, like the Academic Board, Quality Management Development Team and Committee on Ethics. There was also a student representative in each cross-evaluation team. In general, the interviewed students felt that they have good possibilities to influence, but on the other hand, not all students use this possibility to full extent. JAMK's self-evaluation stated that students are in general hard to reach concerning quality issues, due to either a lack of awareness or interest or even fear of the effect of a negative feedback.

Three examples of good practice emerged from the audit interviews which have clearly improved the student motivation to give feedback: 1. Interim course feedback collected at the School of Technology and its immediate utilisation in the development of teaching contents and methods so that students could immediately see the impact of their feedback. 2. Diversity of feedback channels including especially informal oral feedback sessions in the middle of the semester was appreciated both by interviewed teachers and students. 3. The student feedback weeks organised by JAMK's student organisation JAMKO concluding with a summary report to be dealt with the School Quality Teams was mentioned as an interesting feedback mechanism by the top management, the Quality Management Development Team and the Academic Board. Overall, a positive feedback culture should be encouraged so that students are made aware of their feedback possibilities at JAMK-level, at their degree programmes as well through the student organisation. Additionally, JAMK should ensure that there is a feedback loop for every feedback process and the measures based on feedback are introduced to students in an effective way and taking advantage of different communication channels as mentioned in chapter 3.3.

**The feedback information is used in the further development of the degree programmes**

The achievement of the set objectives is controlled by using the above mentioned Balanced Scorecard indicators, analyses carried out within the frame of the performance agreement and feedback collected from different stakeholders. The quality management of education leads to systematic strategic development projects carried out at JAMK-level as



well as making use of the feedback data at the level of degree programmes and individual teachers. This indicates a high responsiveness of the quality management of education.

Following the self-evaluation report, the Balanced Scorecard results were debated by the JAMK Management Team in May 2012. It was determined that the improvement of the credit accumulation was the most important area for development. To improve this part of the institution the JAMK Management Team decided to carry out a more detailed analysis of credit accumulation among different student groups. In the student feedback system a time series of the last three years have been collected and several conclusions have been drawn. It seems that the employment situation of those about to complete their studies and those who have spent one year in working life has improved. Those about to graduate think that they can make better use of their learning and that there has been an improvement in counselling and guidance services. However, somewhat surprisingly, the recent graduate employment survey showed that graduates are of the view that their ability to work as entrepreneurs is weaker than before and that JAMK provides less support for the development of contacts with working life.

Another core instrument used to improve the quality of degree education was the cross-evaluation of all JAMK's degree programmes in 2004–2011. The instrument used groups of trained internal peers to assess programmes based on a self-evaluation report as well as an evaluation visit. Each degree programme was given detailed feedback on how to improve its operations. Based on the interviews and an overview of the results of cross-evaluations, the instrument was characterised as having had a very positive influence on JAMK's degree programmes and quality of education. Cross-evaluations helped to communicate the importance of quality in education throughout the institution, allowed for interdisciplinary cooperation and sharing of good practices and generally increased the publicity of JAMK's results over the published reports. The sample degree programmes chosen for this audit confirmed that follow-up actions have been taken or they are on the way. According to JAMK's self-evaluation, JAMK plans to launch a new evaluation procedure for degree-awarding entities to be conducted at regular intervals.

As raised in the interviews by the top management of JAMK, the upcoming changes in the funding system of Finnish UASs are of concern for the organisation. Based on the recent performance review in education, it became clear

"Cross-evaluations helped to communicate the importance of quality in education throughout the institution..."



that the percentage of students completing their degree within five years differs greatly between subjects and can, in some cases, be lower than 40%. One reason for this is that some students are already employed in their favoured field and do not see the need to finalise their degree or thesis. During the interview with the School Directors, improvement in student counselling was mentioned as a tool to tackle this issue. Tackling this problem simply through student counselling seems to be insufficient. Especially, in the light of the findings concerning the PLP, RPL and student services, there is need for a more comprehensive approach to tackle this issue to secure JAMK's funding. This might include e.g. a review of recruitment and admissions processes; review of the curriculum, learning outcomes and adoption of a wider range of assessment strategies; staff development especially in pedagogic methods; and closer student tracking.

## 6.2 Samples of degree education

### 6.2.1 Bachelor's Degree Programme in Logistics Engineering

The quality management of the Degree Programme in Logistics Engineering enhances the overall planning and implementation of the programme. The curriculum is developed systematically by the programme advisory board which comprises representatives of regional, national and international companies and authorities. As an example of good practice, teaching methods are developed based on students' interim course feedback. The development of the programme's guidance procedures has supported the follow-up of the study progress, although there are challenges with the completion rate. The connection of RDI, entrepreneurship and education need to be strengthened.

The quality management of the Degree Programme in Logistics Engineering is at a **developing** stage.

The Degree Programme in Logistics Engineering Programme (240 ECTS) aims to train future engineers to develop and lead the logistics functions within national and international organisations. In 2011, the Degree Programme in Logistics Engineering had a student intake of 37 students, and a total enrolment of 148 students. The average completion time of studies is 4.7 years and the rate of completion is 48% in five

years. The programme has a strong international profile as the whole programme is conducted in English and about half of the students are from abroad. Entrance exams are organised in 16 countries. The Logistics Department also offers a Master's degree programme in Logistics (60 ECTS) as the only department in Finland. Out of the 17.4 full-time teaching staff, two hold Doctor's degrees and two are Licentiates.

## Planning of education

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The learning outcomes of the Degree Programme in Logistics Engineering are based on JAMK's common learning outcomes and are defined by the programme. The core curriculum contents consist of natural sciences, engineering, logistics professional studies, global logistics management skills and life cycle support, the two latter being elective. The curriculum planning process follows JAMK's joint procedure, aiming to take into account the pedagogical principles and JAMK's joint quality management procedures. The curriculum indicates the competence areas, courses, the intended learning objectives and assessment methods. According to students interviewed, the wide scope and unique profile of the programme compared to similar programmes in other countries has been a major reason influencing student choice.

The programme's strengths in education planning correspond to its capacity for foresight planning the needs of business life and cooperation with working life. The curriculum is reviewed each year by the programme advisory board which consists of representatives of global transportation and industrial companies and authorities as well as the Head of the Programme and Programme Coordinator. In addition, anticipating the curriculum renewal to be conducted in JAMK in 2012–2013, the teaching staff conducted a separate logistics industry forecasting project in 2011–2012 to examine the future skills needs of the logistics sector. The project involved interviews with 26 key persons representing 24 industrial, commercial and public sector organisations.

In the staff interview, the audit team raised the question as to how the academic quality of the degree programme is taken into account in the planning of education. The teachers referred to their wide international and national partnerships and networks, which offer the possibilities to compare the contents, pedagogical approaches and assessment criteria. The programme has, for example, started a cooperation with

**The working life relevance of the degree programme is ensured through the advisory board**

the University of Amsterdam to exchange thesis works and thus to compare the international requirements set for the programmes. National networks including Aalto University and Universities of Jyväskylä and Turku were also mentioned as a source of national comparative data. One important network for the programme is EFLE (European Network of Logistics Education) in which JAMK's Degree Programme in Logistics Engineering is a member. The interviewed staff referred to a recent benchmarking conducted by EFLE but the audit team was not able to find any documentation related to this.

Despite these relevant and functional networks, the programme should establish more systematic ways of developing the academic content of the education, and assuring that it is consistently benchmarked. One prominent idea to this direction was identified in the programme's self-evaluation in which the programme proposed that the well-functioning advisory board system could be further developed by appointing a representative of a foreign university to the advisory board.

#### Implementation of education

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##### **Teaching methods are developed based on interim feedback**

The programme has well-established cooperation with business life during the whole study period. Cooperation actualises in the form of practical trainings, final thesis, visiting lectures, excursions and project works. Project works include research for business life, and the thesis is business-oriented research work in the final part of the studies. More than 90% of the final theses are commissioned by the business life. Two of the programme's theses received awards at the national logistics fair in 2011.

The relevance of the curriculum to working life is monitored through the advisory board, students' traineeship reports, thesis guidance and graduate employment surveys. In general, the interviewed students were very happy with the level of programme's working life contacts and working life orientation which they felt considerably increased their motivation. They were of the view that most teachers have a good working life expertise in industry which enhances the quality of teaching. The students also felt that they are well-informed of the possible future occupational profiles and the high employment rate immediately after the graduation.

In addition to JAMK's normal student feedback surveys described in the chapter 6.1, the degree programmes in the

School of Technology collect interim feedback on all courses. This can be considered a good practice which provides teachers with immediate information about the suitability of the methods used and assessing whether the learning outcomes are being achieved.

The interviewed students felt that they are well-informed of the intended learning outcomes at the beginning of courses. Although the self-evaluation showed that there is variation in the quality of teaching methods and pedagogical solutions, students felt that, in general, teachers are developing teaching methods based on students' feedback. For instance, teachers had recently added theoretical instruction and strengthened the interactive methods. Based on typical survey feedback, students are happy with laboratory work and practically oriented assignments while group assignments are often criticised by students due their inefficiency and large size of groups. The students also appreciate the fact that teachers publicly present the results of feedback and consequent development measures.

The programme's RDI staff are involved in teaching and the development of teaching in laboratory assignments and projects carried out for companies. Two examples were mentioned in the staff interview: CARING project on the Cargo Securing and a TEKES project on Development of Electronic Systems. The connection between RDI and education, however, is weak, and could be still strengthened considerably especially as the programme recruits internationally; also, the accumulation of students' RDI credits is below the average of the School of Technology.

Following JAMK's strategic objectives, the Degree Programme in Logistics Engineering aims to promote entrepreneurship and internationalisation in the studies. With regard to entrepreneurship, this is considered an optional pathway rather than integrated as key skills; if a student shows further interest then he/she is guided towards JAMK Generator.

Internationalisation is part of the programme as there are visiting lecturers from abroad (e.g. from Austria and Czech Republic) teaching on the programme annually; approximately half of the students are from abroad and the whole programme is taught in English. There is also a mandatory exchange period abroad for Finnish students on the programme. Based on the student views, some teachers' English language skills need to be improved. The programme should ensure that the language skills of the teachers teaching

on the programme meet JAMK's language skill requirement i.e. European Language level B2 or above and, if not, additional language training should be agreed in the annual development discussions between the teacher and his/her supervisor.

The programme's guidance procedures are well-established and have clearly supported the programme staff to follow-up on learning and study progress, and students to plan and carry out their studies more efficiently. The career tutors interview each student at least three times during the studies to track possible bottlenecks. The thesis tutors help students to progress in their thesis. Overall, the interviewed students thought that the tutoring system functions well and teachers are approachable. They also appreciated the introductory course at the beginning of their studies. However, the Personal Learning Plan system might be used more effectively and its possibilities could be made more widely known among staff and students. It seems that some students only copy a ready-made timetable as their PLP.

#### Development of education

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#### **The Degree Programme in Logistics Engineering is aiming for international accreditation**

In general, student and stakeholder feedback systems provide the programme with adequate qualitative data which is used in the development of the programme. Besides these formal systems, the Head of Department conducts informal discussions with students which he feels are a useful way to monitor the learning atmosphere. To broaden the feedback mechanism, the programme plans to introduce an alumni feedback system in the form of an online survey or a group interview. This will be an important addition to the current feedback system.

The programme monitors its quantitative results using JAMK-level indicators, including number of first choice applicants, student feedback received on teaching and counselling and number of degrees completed. Based on the data from 2011, a drop in the proportion of graduates finding work was one example of the identified problems and will be addressed by the programme advisory board.

As a proof of the development orientation, the Degree Programme in Logistics Engineering aims to apply for European Accredited Engineer (EUR-ACE) accreditation in the coming years. As a good preparation, the programme was cross-evaluated in autumn 2009 using the EUR-ACE criteria as a basis. The cross-evaluation was followed by the drawing up of a development plan for which three areas for development

were selected: the international accreditation project, staff training and study counselling. The programme expects the accreditation to improve the programme's attractiveness. The audit team recognises the progress made by the programme in recent years in the development of study counselling although the completion rate still remains an issue – and will be a challenge under the new funding model. The audit team encourages the programme to proceed especially with the two first mentioned development targets as they are in line with the audit team's observations.

#### 6.2.2 Master's Degree Programme in Entrepreneurship and Business Competence

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The quality management of the Master's Degree Programme in Entrepreneurship and Business Competence is systematic and support planning and implementation in an excellent way. At the School of Business and Services Management, education and RDI activities are organised separately but in this programme teaching and research are well connected. There is clear understanding of the combination of research and development activities as well as teaching and learning. Even though the student feedback rate is rather low in the student surveys, the presented results and the interviews with students and staff members showed a strong commitment to working life, international networks and development projects. In the future, the connection between JAMK's entrepreneurship studies and the degree programme should be utilised to its full potential.

The quality management of the Degree Programme in Entrepreneurship and Business Competence is at an **advanced** stage.

The Master's Degree Programme in Entrepreneurship and Business Competence is one of the Master's degree programmes at JAMK's School of Business and Services Management. By the number of first choice applicants, the degree programme is one of JAMK's leading programmes at Master's level. In 2011, the student intake was 26 and the total number of students was 117. This means that this degree programme is the largest Master's programme within JAMK's second cycle programmes. The programme is implemented on a part-time basis and a majority of the students are working while studying. The students usually have contact classes

once a month. Taking into account that it is primarily a part-time programme, the drop-out rate of 2.6% is rather low. The proportion of employed graduates was 94% in 2011. The share of doctorate-holder amongst the teaching staff (24%) is considerably higher than JAMK's average (11%).

#### Planning of education

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#### **International benchmarking has helped to improve the curriculum**

As highlighted in the institutional strategy, JAMK wants to become "the most entrepreneurship-oriented university of applied sciences" in Finland by 2015. This Master's programme could have an important flagship role in reaching this goal. According to the programme's aims, students graduating from the Degree Programme in Entrepreneurship and Business Competence are developers of their field who act responsibly as they produce and develop knowledge-intensive professional services.

Besides the already established quality management tools for planning at JAMK level, like joint principles for Master's curricula, learning outcomes and assessment criteria, the School of Business and Services Management uses foresight methods to improve the planning phase of the curricula development. This foresight information is connected to the regional educational needs. Foresight information has been collected also from students at the multidisciplinary course "Innovations and Development". In order to be more effective in the planning of studies, the programme coordinator and responsible staff members pay attention to different interests groups like alumni, working life partners etc. The advisory board of the school including e.g. the City of Jyväskylä and company representatives also play an important role in curriculum improvements. Curriculum development is systematically organised and well-established to improve the programme by using surveys, stakeholder interviews and feedback from students.

International benchmarking helps to improve the curriculum and it is supported, for example, by the network memberships at European Foundation for Management Education, Microeconomics of Competitiveness Harvard or PRME (Principles for Responsible Management). Additionally, the programme has double degree cooperation with the University of Debrecen, Hungary and the University of Applied Sciences bfi Vienna, Austria. The double degree student numbers will increase from four to twelve in the spring term 2013.

The average age of the students is around 30 and because of their working positions and experience they are also important sources for foresight activities and for networking. The programme is yearly updated. Learning outcomes are in place, and assessments are regularly presented to students. Students are familiar with the learning outcomes and requirements in the programme. As it was mentioned in the interviews, students are informed on a regular basis about the learning outcomes, assessment methods and related workload.

The programme is also connected to the Bachelor's programme quality assessment. For example, the results from the "One year after graduation placement follow-up" are used to improve the Master's programme and to follow up the relevance of working life.

#### Implementation of education

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Teaching methods are in line with JAMK Quality Manual and implemented quality tools. Problem Based Learning, e-learning and other innovative methods are implemented in this programme. The Master's uses blended learning approach as a mixture of in-class and e-learning phases. The programme follows JAMK's pedagogical principles. Overall, the interviewed students were very satisfied with the programme implementation. Based on the fact that part-time students are a core target group of this programme, the assessment methods are well-connected to the working life environment of the students. Prior learning is mapped and applications of the learning eligible for accreditation are prepared. The preparation of the Master's thesis is well-defined and supported by academic staff. The students feel well-informed as well as supported by the School and involved staff members. The thesis is evaluated by an interdisciplinary board based at the School of Business and Services Management and the School of Health and Social Studies. As noted by the interviewed students, their knowledge and experience could be utilised even further in teaching as they are experts in their own field.

The programme uses Optima learning platform but also additional interactive tools like Adobe Connect. The programme is oriented towards working life. Personal Learning Plans help students to develop their individual learning pathways and programme plan. The Personal Learning Plans should be prepared together with the student's tutor teacher at the beginning of the studies. However, some

**RDI is well-connected  
to teaching**



of the interviewed students said they had to choose courses for the spring term before discussing their choices with their tutor teacher.

Academic staff of the programme showed a strong commitment to research. Teachers, principal lecturers and the programme coordinator participate in different RDI projects, organising seminars and workshops with companies which are also used to improve the teaching quality. They work in international networks and also with higher education institutions, like the Harvard University and San José State University (CA), around the world combining research and educational activities. The audit team met highly motivated and enthusiastic academic staff members of the degree programme who are aware of the importance of international standards and willing to contribute to the quality system.

#### Development of education

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**The connection  
between JAMK's joint  
entrepreneurship studies  
and the Degree Programme  
in Entrepreneurship and  
Business Competence  
should be developed**

The Head of Department collects all student feedback and prepares the summary to the School Director. The feedback summaries are used at departmental level to improve the quality and to develop the programmes. The study counsellor monitors the monthly study progress of the students and reports to the Head of Department. If necessary, the programme coordinator even contacts students personally. As a good practice, immediate feedback is collected through feedback workshops organised by the second year students.

The education is relevant to working life. The expertise-based planning and implementation of the education is appropriate and well-functioning. Both Finnish and foreign expertise are extensively used. The quality system clarifies and supports the planning and implementation of the education. Feedback and indicators are monitored and systematically used. Joint practices help to make the activities more focused and improve workplace well-being.

The School of Business and Services Management offers new employees an orientation training every August. A general aim of the programme is to increase the teachers' competence to a level of a principal lecturer, including upgrading their academic degrees to the level of PhD. This is a very important prerequisite to improve the quality of teaching and learning and to raise the academic standards within the programme. There is also a clear commitment to internationalisation within the programme at all levels starting by teachers

and following by students as well as by using international benchmarking to improve the programme. Students see a clear commitment to improvements by teaching staff. The programme coordinator and involved teaching staff make an effort to increase the student feedback response rate.

It is strongly recommended that a clearer understanding between JAMK's joint entrepreneurship studies and the Degree Programme in Entrepreneurship and Business Competence will be developed. At this moment, the Master's Degree Programme in Entrepreneurship and Business Competence is not part of the activities under the umbrella of "entrepreneurship studies". However, the content of the programme is connected to the major topics of the "entrepreneurship studies" as highlighted in chapter 7 as an optional target in this audit project. For example, the foresight information generated in this programme could also be used to improve the services in other "entrepreneurship studies".

### 6.2.3 Bachelor's Degree Programme in Business Administration

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The Bachelor's Degree Programme in Business Administration follows systematically the JAMK quality management process, is aligned with defined learning outcomes, and foresight information on the region. The core competences are based with working life; feedback is considered and the curriculum requirements are consulted with the advisory board of the school. There is also evidence of developing links between teaching and RDI, use of new pedagogic methods, like the use of Problem Based Learning and case studies, and utilisation of external evaluations in the development of the programme. However, understanding of academic quality appears to be too dependent upon individual academics rather than embedded within the programme team as a whole. Additionally, students have different learning experiences depending upon their study mode.

The quality management of Degree Programme in Business Administration is at a **developing** stage.

The audit team chose the Bachelor's Degree Programme in Business Administration as the third sample of degree education as it is the largest programme by student number at JAMK. The programme offers several expertise studies in

Sport Management, Financial Expertise, HR, Retail Store Entrepreneurship, StartUp-Entrepreneurship Coaching and Fashion. According to 2011 data, there was a student intake of 172 students, and a total enrolment of 763 students. The programme attracts a high-level of applicants, accepting 5.7 applicants for every place available. Students choose JAMK and this particular programme based on local information and proximity. They normally complete the programme in 4.5 years, although the rate of completion of 59% in 5 years. Only 6% of students are involved in out-going exchange programmes that last over three months. Three members of the programme team hold a PhD qualification, others have a Licentiate or Master's; many are involved in research.

#### Planning of education

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#### **Future forecasting has helped to strengthen the programme**

Planning for the programme is based on an action plan devised by the School of Business and Services Management and the programme team liaises with stakeholders on the advisory board of the school to ensure the curriculum is contemporaneous with the needs of the sector. The competences are based with working life. Relevance of the curriculum to working life is monitored through an advisory board, thesis guidance and graduate employment surveys.

The programme team has been involved in future forecasting, on the basis of individual interaction with the business community and key stakeholders, and formalised feedback. This process has helped strengthen the programme, in particular the choice/development of new expertise studies, and student employment figures. There is evidence of strong cooperation between the relevant industry to the degree programmes, such as links with national and local stakeholders in the fashion industry. Staff are also involved in regional networks created by the membership of Principles for Responsible Management Education. The programme team uses information learned from these networks, RDI links, and participation in external review processes (e.g. EPAS accreditation 2012 of JAMK's Bachelor Degree Programme in International Business) to develop new ideas.

The last extensive curriculum review was conducted in 2008 and the next comprehensive curriculum renewal will be conducted at JAMK in 2012–2013. Currently, individual academics attempt to maintain knowledge within their own discipline sub-field, but more effort should be made to ensure that all the individual parts fit together to create

a coherent academic programme. There should be more systematic academic peer-review of the content to ensure that the programme curriculum and content is meeting international standards. For this purpose, JAMK should consider establishing a programme committee which oversees the development and on-going operation of the programme – ensuring that the curriculum and academic performance meets the appropriate standards.

#### Implementation of education

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Development of pedagogical methods is developed in line with its relevance for the programme, and is assessed by course and student feedback, and other feedback processes. Students learning is assessed according to learning outcomes and students use the Personal Learning Plan process to help direct their own learning pathway, albeit there are different experiences according to study mode (youth education vs. adult education). Attention should be given to ensuring a common student experience for students studying in youth education and adult education, as discussed in chapter 6.1.

Problem Based Learning (PBL) has been used as a pedagogical method in the programme since 2004. However, based on student feedback it was realised that perhaps PBL had been too widely introduced and it was decided to better align pedagogy where it best fit.

As a result of the well-functioning quality management, greater attention is now being given to the development of research methods training. The programme team acknowledged weaknesses with respect to research training, and that research skills were not being adequately developed. Thus, students are now undertaking a large project with direct links with companies. The programme should, however, also ensure that students are provided with more specialised skills, advanced analytical capacities, and complex communications skills that accompany graduate qualifications and will be needed in the future.

Greater attention is now also being given to ensuring that students can/do complete their programme of studies within the anticipated time through the introduction of peer counselling and joint learning; completion rates are improving but much improvement is still required. Going forward, the programme team should take a holistic look at student performance, including total progression, total completion rate, employability, etc.

**Research methods training has been increased due to feedback**

**Entrepreneurship  
needs to be  
strengthened**

There is a strong emphasis on quality management which is built into the annual cycle of the programme. This involves continual feedback with students and stakeholders, and all academic staff are involved in reviewing their own progress and contribution. Members of the programme team are to be commended for being involved in FINHEEC's Centre of Excellence in Education 2010–2012 evaluation and using the feedback in the development of the programme. The programme participated in a cross-evaluation, involving other members of the JAMK academic community. On the basis of the cross-evaluation recommendations, the programme for instance improved the student counselling which has led to positive development of results.

The self-evaluation identified a number of areas in need of development, but they were largely process oriented. For example, measurements used for improving the quality of education noticeably omit any reference to academic quality, academic/RDI expectations for academic staff, qualifications, or staff development. These should be included within the normal programme development processes.

The programme has set itself a very ambitious objective to be “the one of the best degree programmes within the field in Finland”. If the programme hopes to realise its objectives, consideration should be given to ensuring a more comprehensive feedback loop between teaching and research, ensuring that academic research actively informs teaching, and that students are part of this process. Greater attention should be given to developing a strong RDI portfolio. There is reliance on a small cohort of research-active staff, and confusion between academic performance and student projects. While working with students on practical company-relevant projects is an essential component of the programme, this must be underpinned and informed by internationally benchmarked peer-reviewed RDI undertaken by the staff, including peer-reviewed publications. Entrepreneurship studies should also be better included in the programme; some students remarked that entrepreneurship studies were mentioned at the beginning of programme, but not afterwards. The career focus should place greater emphasis on graduates as employer rather than employee.

The new funding model will present specific challenges for this programme. Given the large number of students on this programme, representing almost 10% of JAMK's student

population, overall quality management of this programme, including the completion rate, could bring about significant financial loss to the institution. The School and the degree programme need to review the curriculum and consider how to maintain, and even raise standards, while significantly improving the completion rate.

### 6.3 Research, development and innovation activities, as well as artistic activities

JAMK has an extensive quality system with processes for many aspects of research, development and innovation (RDI), including project and innovation development. The RDI quality procedures are used and referenced by the JAMK community. However, RDI system is not fully aligned with the strategic and academic mission and ambition of the institution. Practices are focused primarily on student activity, individual projects and consultancy rather than building the requisite academic competences, capacity and capability of staff and of students. RDI indicators have been identified following government's objectives but there should be more strategic analysis of that data, and evidence of quality assessment of RDI activity, performance tracking or strategic analysis. The concept of RDI is unevenly understood and implemented across the different schools/ departments and service units, and should be embedded more closely within the teaching, regional engagement, entrepreneurship or internationalisation missions of JAMK.

The quality management of RDI is at a **developing** stage.

According to JAMK's RDI principles, the purpose of the RDI activities is to develop the working life and industries in the region on a needs basis, improve the well-being of local residents and generate entrepreneurship based on new expertise. JAMK has four focus areas: Innovative learning; well-being of families and promotion of health; competence-intensive service business; and forest industry cluster. Bioenergy is JAMK's regional centre of expertise. According to JAMK's audit material, the focus areas of the JAMK strategy and the realisation of profiles are connected to the Central Finland's innovation centre which is being built up in the region as an extensive cooperation network under the direction of the City of Jyväskylä. JAMK also seeks to add the internationalisation of RDI. Currently, JAMK has 41 externally

**RDI quality management supports the implementation of RDI projects from start to close**

funded international RDI projects. The expected volume of RDI activities in 2012 was 11 M€.

JAMK has a quality system with very clear policies and procedures providing guidance for staff and students across a wide range of RDI activities, inter alia developing a research project idea, planning a project and applying for funding, launching, implementing and closing a project, and supporting business innovation. The feedback system related to RDI project is versatile including customer feedback, freely worded feedback of the RDI project steering group and the finance provider feedback. Project portfolio review (including chargeable services) is conducted quarterly by the school and JAMK management teams, and decisions have been made on the basis of the RDI performance in different schools and focus areas based on the RDI volume, funding sources, average length of RDI projects and customer feedback. Overall, there are clear steps that follow the Plan–Do–Check–Act phases; these indicate the important steps to be taken by each member of staff which ensures rigid adherence to common standards and processes.

JAMK is to be commended for using international benchmarking and review processes, e.g. FINHEEC RDI evaluation (Maassen et al. 2012)<sup>12</sup>, and EPAS accreditation (2012), to assess its RDI performance and inform research policies. JAMK monitors itself against indicators identified by the Ministry of Education and Culture. The Ministry of Education and Culture has allocated JAMK several times performance-based funding on the basis of good results in RDI.

"... every 2 or 3 years, JAMK commissions an external thematic evaluation of its education or RDI activities."

Additionally, every 2 or 3 years, JAMK commissions an external thematic evaluation of its education or RDI activities. According to RDI thematic evaluation commissioned by JAMK in 2011 (Sotara et al. (2011)<sup>13</sup>, these actions emphasise a good awareness of "the significance of RDI activities and the organisation's expertise is at a good level" (quoted in JAMK's self-evaluation report), however there are also areas requiring further attention. These include

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<sup>12</sup>Maassen et al. (2012) *From the bottom up. Evaluation of RDI activities of Finnish Universities of Applied Sciences*. Publications of FINHEEC 7:2012.

<sup>13</sup>Sotara et al. (2011) *Maakunnasta maailmalle. Uuden etsintä ja managerialismin kahleet Jyväskylän ammattikorkeakoulun tutkimus-, kehittämis- ja innovaatiotoiminnassa*. Reports of JAMK University of Applied Sciences 17.

strengthening the expertise of staff; encouraging internal entrepreneurship; increasing the number and knowledge of academic staff in/about RDI; integrating RDI activities with teaching; improving RDI management and evaluation; improving and widening dissemination and communication of RDI activity and results; and enhancing the participation by students in RDI activities.

While some of these issues were identified in JAMK's self-evaluation report, the general conclusion of the self-evaluation workshop was that "the state of RDI activities is good" and only three areas were noted for further development: 1. Improving the orientation of staff members to RDI plans and practices, 2. Better utilisation of feedback and project results; and 3. Integrating RDI activities with teaching more effectively. The differences in interpretation between the external and internal reviews of RDI at JAMK highlight the challenge gap that must be addressed if JAMK's mission is to be achieved.

In recent years, JAMK was given additional requirements by the UAS Act 351/2003 to "carry out applied research and development activities that serve UAS education, support the world of work and regional development, and take the industrial structure of the region into account".<sup>14</sup> The process of growing a quality RDI culture – of transforming an institution from a teaching to a research-informed institution is complex. JAMK is undertaking this process while also responding to the demands and requirements of a changing higher education landscape in Finland and internationally. Academic staff members have to acquire and/or develop their research competences. This presents a major challenge for JAMK.

Developing a quality RDI culture requires more than the development of processes; it necessitates that the concept and role of RDI is understood by the whole community as fundamental for underpinning academic excellence in a higher education institution and not simply an "additional requirement". Currently, the quality management process is focused disproportionately on developing the processes identified above rather than focusing on ensuring the quality of RDI activity.

**Competences of  
RDI staff should  
be developed**

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<sup>14</sup>Maassen et al. (2012) *From the bottom up. Evaluation of RDI activities of Finnish Universities of Applied Sciences*. Publications of FINHEEC 7:2012, p. 27.



JAMK variously defines RDI as activities which attract external funding or in terms of projects, usually involving students, linked to the needs of working life. The self-evaluation refers to RDI in terms of performance indicators: Balanced Scorecard (BSC) results, RDI project portfolio reviews, feedback by customers, and the steering group and external evaluations. Senior members of JAMK made references to applied or Mode 2 research to distinguish the RDI focus of JAMK from the scientific research conducted by universities. To enhance and embed the quality system of RDI, JAMK should develop an understanding of RDI, in line with international good practice. Developing an academically rigorous RDI profile does contradict the mission of JAMK. Rather it is the balance and differentiation between the research focus and the fields of specialisation rather than simply distinguishing between fundamental or scientific and applied research focus.

Research active staff are essential to a quality university-based RDI culture. This helps develop a rich learning environment with state-of-the-art knowledge integrated with teaching, regional engagement and entrepreneurship. This ensures that the educational content is rigorous and contemporaneous with best international practice in the particular field, whether that is engineering, business, nursing, etc. Because the percentage of such staff is relatively low (15%) at JAMK, they carry a disproportionate burden of responsibility. To embed good standards, the JAMK personnel programme should be taken forward with great urgency; while there may be differences across the schools, there should be a holistic articulation of academic expectations, which includes qualifications, competences and RDI outputs rather than setting different sets of requirements for RDI, internationalisation, entrepreneurship, etc. This should form part of the annual performance review.

Recruitment at PhD level, promotion criteria, and the development of an appropriate career structure are important components to encourage and reward achievement. Balance is required to ensure the criteria reflect JAMK's mission and the breadth of research outlet formats. At the same time, JAMK should put in place the necessary policies and procedures to support its academic staff reach its goals. Closer alignment between the academic mission of JAMK human resources policies and RDI aspirations should be developed to ensure the introduction of an appropriate recruitment, promotion, and career structure along with policies to encourage and

reward achievement. JAMK should set out what it expects from academic staff, in terms of academic qualifications, competences and RDI outputs, which could then form part of the annual performance review. Research training, for both academic staff and students, should be also required.

RDI is a core principal for JAMK, and the institution has identified four focus areas with some notable exemplars in bioenergy and cloud software. However, it is not clear whether the focus areas are simply a method for listing activity or they play a central role in the coordination of research around areas of specialist academic focus. Overall, activity is eclectic, favours non-peer review, and mixes academic performance with student activity. Verification of a dynamic circle of RDI-informed activities serving UAS education was also absent.

A good example of what could be done is in bioenergy, which JAMK has identified as its regional centre of expertise based on novel development activity and links with regional stakeholders; a continuing professional development programme is targeted at unemployed science graduates. The heating boiler testing laboratory of Bioenergy Development Centre operates under the accreditation certificate of VTT Technical Research Centre of Finland. However, few academic staff members are involved, and activity gives the impression to be routine testing with limited evidence of research; the above-mentioned programme does not carry a qualification. Overall, the activity appears to operate independently from the core educational mission.

Because higher education quality is assessed on the basis of academic output, the audit team recommends that a research assessment exercise is conducted to provide an independent assessment of RDI quality, benchmarking information and establish reputational yardsticks. This should be repeated on regular intervals.

Students and academic staff report uneven experiences regarding the level of preparedness and effectiveness of research training as part of the Bachelor's/Master's studies. There was reference to research methods, ethical principles and thesis preparation, but no guidelines for RDI supervision. Students should have acquired advanced analytical capacities, which are garnered through, inter alia, conducting independent research. The quality system should also begin to look more closely at how research informs teaching, how it is embedded within the curriculum to ensure that the topics and reading material brings the latest information to students.

**JAMK should consider launching regular external assessment of RDI activities**

## 6.4 Societal impact and regional development work

The quality management of societal impact and regional development function well and advance the development of the operations. Furthermore, the stakeholders participate in the development work and the quality system supports the activities through meaningful information. However, although JAMK caters to the needs of the region through its educational and research, development and innovation (RDI) activities, it does not wholly fulfil the role of being a prime-mover in the region. There is neither systematic procedure to develop regional development activities nor a strong link to the development strategy of the region and the City of Jyväskylä. Certain activities in this area are present through the educational and RDI work but the interconnectedness and the systematic approach need to be addressed.

The quality management of societal impact and regional development work of JAMK is at a **developing** stage.

**JAMK's societal impact and regional development is realised as a part of core processes: RDI and education**

According to the JAMK Quality Manual, the ultimate aim of JAMK's activities is skilled labour, innovations and entrepreneurship, which together promote the success and internationalisation of Central Finland and other operating areas. As presented in the JAMK Strategy 2015, each of three strategic priority areas includes service promises related to societal impact and regional development work. For instance, in the first strategic priority area, i.e. quality of learning, this is titled as work life reforming expertise, and includes the following promises:

- We will offer continuous development possibilities for individuals in the labour market.
- We will offer support for learning development that takes place in the workplace.
- We will increase our number of development partnerships.

Similarly, in the second strategic priority area (entrepreneurship) the promises relate to customer-oriented enterprise and innovation services and in the third priority area (internationalisation) they relate to effective internationalisation services for working life.

JAMK aims to fulfil its regional development as a part of core processes: education and RDI. As it comes to education, JAMK's objective is to connect the regional forecasting process to the curriculum development and

to take into account Central Finland's regional strategies. Regional development projects connected to the R&D projects in JAMK's six surrounding regions consist e.g. of development of adult education, development of regional food culture and development of security technology. As noted by JAMK, quality management conducted in the context of RDI activities and degree programmes is central to regional development, however, following the structure of JAMK's self-evaluation, this chapter only discusses the quality management of open studies, continuing education and services, and the implementation of corporate responsibility.

Besides the degree programmes, JAMK offers open studies and continuing education to cater to the needs of the local population. Continuing education programmes are an essential part of the activities at all JAMK's schools; there are about 10.000 participants annually. Degree programme courses are offered as part of open studies, which are coordinated by the planner of open studies. Open studies students are also given the opportunity to enrol in degree programmes.

In the discussion with employees from the Bioenergy Development Centre, continuing professional development programme in this area was identified as an opportunity for graduates to obtain further qualifications. Likewise, there was evidence from the interviews of good external stakeholder involvement in the Bioenergy Development Centre; public authorities worked with the Centre and its degree programmes were favourably remarked upon by stakeholders and the local business community. Overall, it became clear during the interviews with external stakeholders that JAMK's activities for the region and in the region are appreciated.

Regarding its economic responsibility, JAMK generates benefits for regional business and local residents both through direct money flows and through indirect impacts such as generation of innovations or competent workforce. Environmental responsibility is incorporated into JAMK's responsibility programme 2010–2015; as part of which World Wildlife Fund's Green Office environmental system has been adopted. Furthermore, environmental issues have also been integrated into curricula and project activities. Concerning social responsibility, JAMK has introduced measures to improve the management competences and well-being of its staff. As a result of the audit in 2006 and the self-evaluation conducted at JAMK in 2011, JAMK has begun to develop a process to assess and manage the quality and type of

"... it became clear during the interviews with external stakeholders that JAMK's activities for the region and in the region are appreciated."

partnerships both at school and JAMK level. The schools have chosen the TOP 20 partners and appointed staff members responsible for these interest groups; this is an important development because there can be a tendency for the number of partnerships to grow without sufficient strategic attention.

The sales team established to foster JAMK's sales activities is seen in the self-evaluation report as an asset for the institution. JAMK has started to conclude partnership agreements with its most important customer organisations and the R&D Development Services has a lawyer to support this process. The management of customer relationships is assessed by JAMK in the self-evaluation report as being at an unsatisfactory level. Managing contacts through a single stakeholder coordinator at the schools is seen as problematic. The response time to customers' wishes is sometimes too long due to other obligations by the necessary staff. Since the "Prospekti" system to handle partnership management is regarded as difficult to use and entering information in it is considered strenuous, little use has been made of it.

Despite these very impressive activities, a strong regional commitment was not strongly evident in either the self-evaluation report or the interviews. The link between JAMK's mission and strategy and the development strategy of the Central Finland region or the City of Jyväskylä, and consideration of JAMK's role vis-a-vis Central Finland were not apparent or well articulated during the audit team's visit. Regionalism appeared to operate separately from the JAMK's other dimensions. JAMK should consider how it can strengthen this aspect of its mission as a critical component of its distinctiveness.

**Quality management  
of open studies is  
similar to that of the  
degree education**

In specialisation studies, continuing education and chargeable services the follow-up and evaluation are largely the responsibility of the individual schools. The management of JAMK has decided to give the schools autonomy in this field since they know best their customers and the feedback processes suiting them.

The quality management procedures applied to degree programmes are also used in open studies including the collection of student feedback and the quality management procedures for specialisation studies, continuing education and chargeable services are detailed in the quality guides of individual schools. In the interviews with both teachers and students, it became clear that the courses in open-studies

and continuing education are fully integrated in the JAMK quality system and employ the same quality management mechanisms as the degree programmes.

The departments at JAMK have managers who are responsible for continuing education and chargeable services. The most important shared support services in this area are marketing, financial services and R&D development. The support services also coordinate the regional cooperation in Central Finland and cooperation between JAMK and the Tampere University of Applied Sciences. The units at JAMK that provide chargeable services have their own quality systems complying with different professional norms. The achievement of the goals of continuing education and chargeable services is evaluated using a diverse set of instruments, such as the objectives set by the Ministry of Education and Culture, Balanced Scorecard results, the reviews of RDI projects and external evaluations.

With JAMK's strategy of becoming Finland's best UAS and being also more competitive internationally, the question was raised during the interviews whether this new focus could possibly be harmful for the regional development work. The JAMK Management Team stated that in their view the new mission will not be harmful to the activities of the region but on the contrary would actually support its regional development. The JAMK Management Team referred to the fact that JAMK is already training foreign staff for big local export companies and thus working internationally but in the same time directly supporting local business companies. Also the stakeholders supported this view. However, the interviews with the top management, the external stakeholders and the teachers also gave the impression that these activities are rather uncoordinated and depend on specific needs of single companies.

As mentioned in the self-evaluation report, the participants of the students' self-evaluation workshop commented that there are substantial differences between the schools regarding the possibilities of students to participate in services offered to working life. The self-evaluation report of JAMK and the interview with the top management additionally suggested that the impacts of regional development and the corporate responsibility activities should be more visible at JAMK.

JAMK should develop a more cohesive approach to its regional strategy, linking education, RDI, entrepreneurship

**The interplay of JAMK's mission and its regional development activities should be strengthened**

and internationalisation with regional development activities. If this is done well, this could heighten the attractiveness of JAMK internationally.

# 7

## Studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students' perspective

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In line with its institutional strategy – being the most entrepreneurship-oriented university of applied sciences in Finland by 2015 – JAMK has developed a large number of studies in the field of entrepreneurship, and which have different formats and support different aspects, from training to functional services to establish entrepreneurial businesses. Different personnel groups and students are involved in the development of these operations in a meaningful manner. External stakeholders also participate. However, the rapid growth of entrepreneurship studies, with a particular emphasis on the JAMK-Business Incubator, has not led to a systematic or coherent quality management and development procedure for this strategic field and its operations. Rather, single studies rely on individual approaches and some examples of support and service functions are relatively functional in approach. While there are some excellent examples of good practice, such as Team Academy, there is also unevenness in the way in which entrepreneurship studies is experienced by different cohorts of students. JAMK should adopt a holistic approach to entrepreneurship studies, ensuring better integration into the quality system.

The quality management of studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students' perspective is at a **developing** stage.



**There is a strong  
commitment to  
entrepreneurship as  
JAMK's strategic goal**

The roots of entrepreneurship at JAMK lie in the experience of Team Academy, which was chosen as a FINHEEC Centre of Excellence in Education in 2000. Since then entrepreneurship studies has been one of the key components of JAMK's institutional strategy and focus areas. JAMK's goal is to be "the most entrepreneurship-oriented university of applied sciences" in Finland by 2015. To reach this goal JAMK is focusing on the following key areas: generation of new enterprises and entrepreneurs; provision of customer-oriented and innovation services; and establishment of internal culture of entrepreneurship. These most important strategic objectives are also measured through a Balanced Scorecard.

Entrepreneurship is considered a mutual responsibility of the whole organisation and JAMK Management Team. There is a shared understanding of the importance of entrepreneurship within the organisation from the top management, teachers to students. Staff members and students are aware of entrepreneurship as a strategic goal and core area at JAMK. Support structures for entrepreneurship studies are provided by different units within JAMK, as evidenced by the strong commitment to enhancing understanding of entrepreneurship, creating a culture of inner entrepreneurship and improving student entrepreneurship, in particular.

The Balanced Scorecard provides an important framework by which to systematically measure this activity, with objectives linked to the overall strategy. JAMK also pays attention to furthering its performance, as demonstrated by its participation in a benchmarking project<sup>15</sup>. Information provided shows improvement in the results in entrepreneurship over recent years.

However, there is no common definition of entrepreneurship understood by all JAMK stakeholders. Although entrepreneurship is a key strategic goal, there is no individual or senior management responsibility and ownership for achieving entrepreneurship-related tasks. This will make it difficult for JAMK to identify the appropriate targets and appropriate pathway(s) to reach its strategic goal or to gauge when the goal has been reached. The coordinating

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<sup>15</sup>FINHEEC benchmarking project 2012 between JAMK University of Applied Sciences, Finland & University of Debrecen, Hungary & Athlone Institute of Technology, Ireland: Innovation activities and entrepreneurship.

function between the different activities is also weak. For example, because many of the entrepreneurship activities and studies have a relatively short history (having been started in the last 3–4 years), these “Greenfield” activities are not yet integrated within a systematic quality system.

As a priority, JAMK should develop a common understanding of entrepreneurship studies, and ensure common approach and experience for all students. In addition, management ownership and identification of responsibilities for entrepreneurship studies within the JAMK Management Team and organisational structure should be enhanced. A systemic and strategic review of the indicators used – and more appropriate ones adopted – should also be undertaken.

JAMK established the JAMK Generator in 2011 to provide students and staff members with a structured and programmatic set of different entrepreneurship studies (see Figure 5):

**Stakeholders and students were very positive about JAMK's entrepreneurship support**

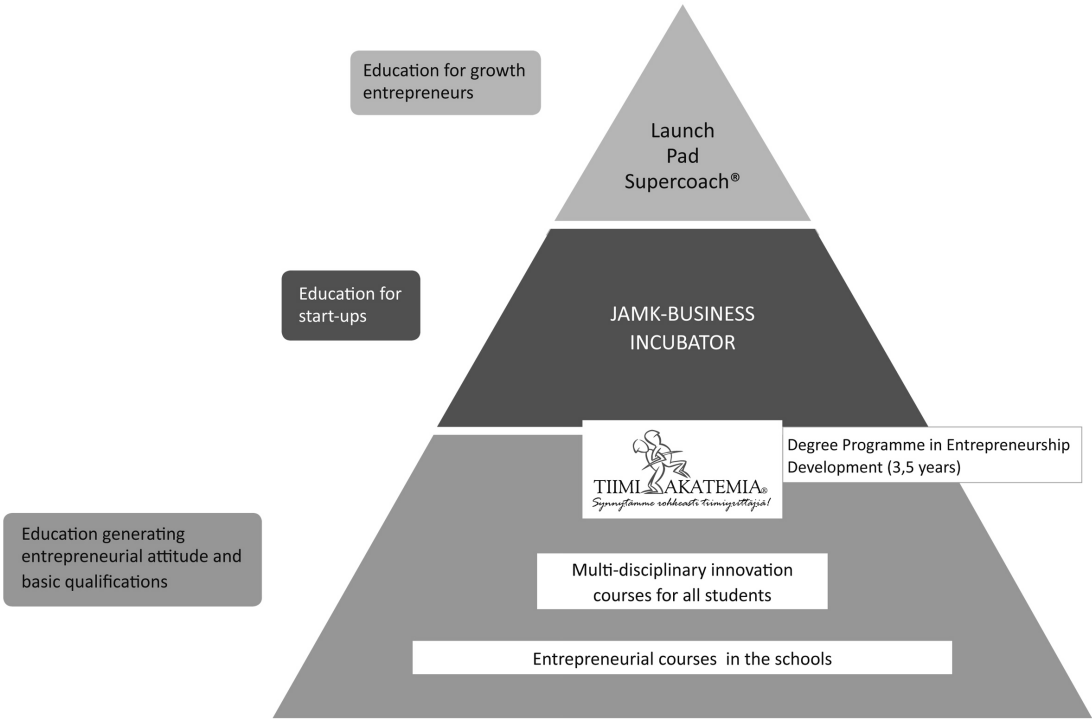


Figure 5. JAMK's entrepreneurship studies. *Source: Self-evaluation of the Quality System at JAMK University of Applied Sciences, 2012.*

JAMK offers more than 40 courses in the thematic area of entrepreneurship and innovation. It also offers a Master's Degree Programme in Entrepreneurship and Business Competence, which is one of the three sample degree programmes that form part of this institutional audit. In addition, JAMK-Business Incubator provides targeted services for start-up companies, Team Academy provides a unique and award-winning educational programme, and "Launch Pad and Supercoach" provides coaching for growing companies. The JAMK-Business Incubator and JAMK Generator both provide a platform for new ideas, and mentoring for business concepts plus growth entrepreneurship. Innovation support is described in the JAMK Process Manual (TOKA). Invention reports help to collect and organise potential ideas and innovations.

Stakeholders have a very positive experience of JAMK's entrepreneurship support. JAMK-Business Incubator services were further developed taking into account the experiences of Nestronite company. It was the first start-up company where JAMK has invested capital and owns a share. For entrepreneurship it is important not to standardise everything but to give more freedom for new ideas. Therefore, at the moment JAMK's entrepreneurship studies and services are more independent and outside of the entire quality system. In the next stage, JAMK should seek to integrate entrepreneurship services better within the quality system.

JAMK is going to introduce a new institution-wide curriculum model with obligatory entrepreneurship courses for all students. This will mean that, for all degree programmes, 5 ECTS entrepreneurship studies will be an integral part of the curriculum. This innovative approach is aligned with the institutional strategy and should be highlighted as an example of good practice.

The self-evaluation report displays a set of evaluation results about entrepreneurship studies at JAMK. It illustrates a rapid development between 2010 and 2011. This growth is the result of a diverse set of different, but overlapping and parallel activities and services. As a consequence, JAMK has recently undertaken a re-engineering process. The quality system delivers relevant information and helps the JAMK-level working group. This process should help advance improvements as well as achieving the strategic targets.

The institution uses the Plan-Do-Check-Act (PDCA) cycle in all its entrepreneurship studies, however, quality management activities are implemented in different ways. For example, Team Academy students are the driving force behind

"The institution uses the Plan-Do-Check-Act (PDCA) cycle in all its entrepreneurship studies, however, quality management activities are implemented in different ways."

their quality system; they develop their own questionnaires to substitute JAMK's questionnaires. However, the Team Academy students participate in answering the OPALA feedback and they also fill in a year after graduation survey. At the same time, these students showed an exceptionally high commitment to quality as well as satisfaction with their programme, and the quality management and culture at JAMK. Despite this exemplar programme, the audit team was unable to identify a holistic understanding or integration of quality measures for entrepreneurship studies across different areas or study fields. While the PDCA cycle is used as a standard quality management process for single studies there was insufficient evidence of a general quality management approach for entrepreneurship studies.

Student entrepreneurship is an important part of JAMK's entrepreneurship approach. This is in sharp contrast to the approach adopted for or by JAMK staff. The audit team could not clearly identify a human resource component. For example, JAMK offers entrepreneurship studies and training for staff members but this does not seem to be systemic; if staff members are interested, they can take part in entrepreneurship courses and trainings. Some of the teaching staff understand their narrowly role as linking students with entrepreneurship support units rather than encouraging an entrepreneurial culture.

Therefore, the audit team recommends that JAMK integrate human resource development into the quality processes in order to systematically improve the entrepreneurial perspective and culture of staff. Aligning human resource development to entrepreneurship for staff members should help develop a broader entrepreneurial attitude within the organisation while also strengthening the role of human resources as an essential factor for achieving JAMK's institutional strategy and targets. Senior management coordination of entrepreneurship studies should ensure adoption of a more holistic approach to entrepreneurship services, better integrated within the total quality system. Otherwise, there will be an imbalance between student and staff entrepreneurship understanding and experience at JAMK.

Since 2000, a number of external evaluations have been conducted on two other strategic goals: quality of learning and internationalisation. This audit is the very first time the third strategic goal, entrepreneurship, is the focus of an external evaluation. While JAMK had previously participated in the

**The evaluation and development of entrepreneurship studies should be based not only on quantitative measures but also on benchmarking feedback**

above-mentioned benchmarking exercise, benchmarking is not normally included as part of the PDCA cycle. However, without systematic benchmarking JAMK cannot adequately measure and identify its position within the field, especially at an international level. To fulfil its goal of being the best entrepreneurship-oriented university of applied sciences, JAMK should integrate benchmarking into its quality development portfolio. This can be accomplished by systematic national and international benchmarking based on the defined indicators measuring entrepreneurship at JAMK.

The evaluation of entrepreneurship studies and therefore the development of this field are based mainly on quantitative measures. JAMK-Business Incubator, for example, increased the number of new business ideas. The future challenge will be how to evaluate new ideas if the number does not increase in the same proportion as previously. One solution could be to implement an innovation and intellectual property rights (IPR) management system to follow the workflow at different stages, to manage innovation within JAMK's process workflow, and to use this to improve the system. The implementation of an innovation and IPR management system should help improve entrepreneurship at JAMK.

"The implementation of an innovation and IPR management system should help improve entrepreneurship at JAMK."

JAMK offers many different entrepreneurship services and courses. However, it has many different parallel activities and services at both central and academic level, that it risks duplication and confusion; there is no systematic coordination which is compounded by the fact that different units report to different heads. There is no coordination for quality improvement or formal development team for entrepreneurship. In particular, there is some overlap between the roles of the JAMK Generator and the JAMK-Business Incubator with respect to accelerating new business ideas. There is also no clear link between JAMK's four focus areas (innovative learning; well-being of families and promotion of health, competence-intensive service business; forest industry cluster) and entrepreneurship – which suggests that each of these areas are operating as silos to the detriment of JAMK and the region. It would seem that entrepreneurship is understood primarily as a broad framework with loose connections to the focus areas.

# 8

## The quality system as a whole

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JAMK has set ambitious goals for itself: to be the “best university of applied sciences in Finland” with a strong track record in quality of education, internationalisation and promotion of entrepreneurship. Underpinning this, JAMK has created a comprehensive quality system covering the majority of its functions, including education, RDI, social impact and regional engagement, and entrepreneurship. There is clear evidence of a common appreciation of the basis of and need for the quality system, and broad institutional adherence to its principles. Evidence of the impact of the quality system on the development of operations, and the way in which JAMK conducts its business is obvious everywhere. The system has been developed in a deliberate manner, with lessons being learned from previous audits, external benchmarkings and other international reviews.

Nonetheless, there is room for improvement especially in ensuring the quality objectives and process are adequate to support JAMK’s objective to operate successfully in an increasingly international and competitive environment – as evidenced by choosing an international FINHEEC audit. Developments nationally, such as new regulations for universities of applied sciences and funding arrangements will also make a more challenging operating environment. There should be more emphasis on ensuring that quality processes and objectives are more thoroughly harmonised and embedded across JAMK. There is, for example, a tendency to consider the process and degree of implementation of the quality processes as themselves a measure of “quality”; indeed, there is an assumption that if the processes work

well, then quality automatically follows. The challenge is not simply getting the process and measures right (a technical problem) but ensuring that the system motivates the right behaviour (an alignment problem).

The quality system as a whole is at a **developing** stage.

#### Comprehensiveness and impact of the quality system

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JAMK has developed a sophisticated quality system, and can be congratulated on the fact that the processes and procedures are well known by its entire community. This is demonstrated by the absence of any dissenting voices, and by strong acceptance, by the various units of the organisation, of their role and responsibilities – further evidence that people take the quality system seriously. There is strong evidence from all sections of the JAMK community of understanding the need for and adherence to the basic tenants of JAMK's quality system. In 2011, JAMK clarified the objectives of its system through the principles and purpose of quality management, using the "OTA KOPPI" idea.

JAMK's current quality management processes have been guided by the results of previous audits, reviews and benchmarking activities, inter alia, the FINHEEC audit 2006; cross-evaluation of programmes and curriculum 2004–2011; ISO 9001 certification for engineering education and EPAS accreditation (2012) for international business.

Over the years, JAMK has developed a comprehensive quality system, which responds to the recommendations made in the various reports and its own internal processes. Its quality system is now simpler, providing clear structures and processes for monitoring the quality of its activities. The structure includes internal structures, involving the JAMK Management Team, the JAMK Ltd Board of Directors, the Academic Board, the schools, the service departments, JAMKO representing the students, and external stakeholders. It has an electronic version of the guidelines, which cover most, if not all, the main function areas, such as curriculum, project and business innovation development – so that regardless of which section, the same processes are followed. Several systematic, participative methods, involving students, staff and external stakeholders (also international partners), have been used to help define and refine JAMK's strategic objectives. There is evidence that feedback is put into use in

different levels of JAMK as well as developing for instance strategic and operations management, curriculum, teaching methods, RDI processes and the quality system itself.

Functioning of the quality system regarding the audit targets

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JAMK has established clear strategic focus for its quality system, and has implemented different initiatives and channels involving all its staff, students and external stakeholders. The responsibilities have been clearly defined in such a way that they form a coherent system with people committed to quality development and quality enhancement. However, JAMK should go further to both streamline and embed the concept of quality. The process is still strongly system-driven, and consideration should now be given to developing a greater shared understanding of quality to which all staff and students can commit. This includes developing better communication systems.

**Quality policy**

JAMK has defined its goals, in agreement with the Ministry of Education and Culture, and translated institutional targets into unit-level goals and activities in performance agreements between the Rector and schools/administrative units. Performance is monitored against its Balanced Scorecard (BSC) and at individual staff and student level, and feedback is continually evaluated. The performance management system has begun to link staff activity/performance with the strategic goals of JAMK. The BSC methodology provides a useful set of targets and metrics, but it is not always clear that the most appropriate information is being collected or analysed. Quantitative indicators should be complemented with qualitative ones reflecting more complex understanding of issues. A fully-functioning institutional research capacity would provide important strategic and forecasting support and guidance. JAMK should critically analyse its quality system and its operations in the full knowledge that quality is not improved by more processes or increasing control but increasing understanding of the importance to act according to mutual agreements and quality procedures.

**Strategic and operations management**

JAMK's quality system has been systematically developed by using several procedures, including external and internal review and evaluation process, periodical web-surveys, student feedback, and external engagement. These processes have identified strengths and weaknesses, which are also

**Development of the quality system**



reflected in JAMK's self-evaluation report prepared for this audit. Heretofore, JAMK's operating environment has been Finland; it is now necessary to strengthen the international dimension of quality management, drawing on external benchmarking and systematic comparison with peer HEIs. The changing national policy environment will require a quality management that can maintain and enhance quality.

**Degree  
education**

JAMK's quality procedures ensure that all educational programmes are developed in alignment with the principles of the European Higher Education Area, the European Qualifications Framework, National Qualifications Framework proposal etc. Programmes also seek to assure alignment with the demands of working life, and have established advisory boards comprising external stakeholder representative. This has ensured a common framework for all programmes, although actual implementation is often uneven. There are differences in the way in which Personal Learning Plans (PLP), RDI and entrepreneurship studies are addressed by different programmes, and student; students in youth and adult education often experience different levels of quality. The qualifications, experience/expertise and performance of academic staff also varies, which has an impact on overall academic quality. The cross-evaluation initiative can facilitate a JAMK-wide understanding of quality, while also identifying disciplinary differences; such activity should not, however, replace the need for external/international peer and stakeholder assessment. Each of these aspects is seen independently of each other, with few linkages, whereas greater attention to ensuring a total quality experience is required to ensure the appropriate academic quality and standard for an HEI operating in a competitive marketplace. Each degree programme under audit reflects these issues, however, there are different emphases in the quality management between the different programmes. Some schools and staff, such as the School of Business and Services Management, shows a particularly strong commitment to improving academic quality through encouragement of academic RDI with links to teaching, and international benchmarking as evidenced by its EPAS accreditation. JAMK should share this good practice and its recommendations with other sections of the institution.

The quality management of the Degree Programme in Logistics Engineering is at a developing stage. The programme's strengths in education planning demonstrate

JAMK's capacity for foresight alignment with the needs of business life and cooperation with working life. Teaching methods are developed based on students' interim course feedback. The development of the programme's guidance procedures has supported the follow-up of the study progress, although there are challenges with the completion rate. The links between RDI, entrepreneurship and the curriculum need to be strengthened.

The quality management of the Degree Programme in Entrepreneurship and Business Competence is at an advanced stage. International benchmarking has helped to improve the curriculum. There is clear understanding of the link between research and development activities with teaching and learning. Students and staff members of the programme show a strong commitment to working life, international networks and development projects. The audit team recommends that a clearer understanding between JAMK's joint entrepreneurship studies and the Degree Programme in Entrepreneurship and Business Competence will be developed.

The quality management of Degree Programme in Business Administration is at a developing stage. The core competences are based with working life and stakeholder and student feedback. Future forecasting has helped to strengthen the programme. Additionally, there is evidence of links between teaching and RDI, use of new pedagogic methods, like the use of Problem Based Learning and case studies, and utilisation of external evaluations in the development of the programme. Entrepreneurship studies should be better included in the programme.

RDI is a national and institutional priority for JAMK. Accordingly, it has developed an extensive system of policies and procedures for ensuring common practices across a wide range of RDI activities. The process of growing a quality RDI culture is complex, and will require greater attention to embedding an understanding of a quality research culture within its academic and support services, and educational programmes. The quality system should also ensure that RDI continually informs teaching and refreshes the curriculum.

JAMK, as a university of applied sciences, has a stated commitment to its region. There is strong external stakeholder involvement at the corporate and curriculum level. Additionally, the Bioenergy Development Centre provides a potential good example of how educational

**Research,  
development and  
innovation (RDI)**

**Societal impact  
and regional  
development work**

programmes, RDI, regionalism and entrepreneurship can help build unique strategic advantage for JAMK and its region – albeit at the moment many of the linkages remain aspirational. Despite these strengths, the link between JAMK’s mission and strategy and the development strategy of Central Finland region or the City of Jyväskylä should still be strengthened. Regional activities are not well coordinated either within educational programmes, or as a strong theme in RDI. Rather many of the notable activities appear to be dependent on individuals or the specific needs of single companies. Similarly, there does not appear to be a coherent strategy linking the international development of JAMK with regional development activities.

**Studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students’ perspective**

JAMK has identified one of its strategic goals as being “the most entrepreneurship-oriented university of applied sciences” in Finland by 2015. To reach this goal, it is focused on encouraging students to generate new enterprises and become entrepreneurs; to develop customer-oriented and innovation services and to establish an institutional culture of entrepreneurship. There has been a rapid growth of the entrepreneurship studies at JAMK as a result, with particular emphasis on the JAMK-Business Incubator. There are some excellent examples of good practice - such as Team Academy where students are actively involved in shaping their learning – but there is also unevenness in the way in which entrepreneurship is experienced by different cohorts of students. There is a need to ensure a holistic approach to entrepreneurship studies with better integration into the quality system.

**Future challenges and JAMK directions**

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JAMK, as all other HEIs in Finland and internationally, faces a challenging environment. Globalisation has increased the emphasis and pressure on higher education as an internationally-traded service operating in an increasingly competitive international marketplace. These developments have increased the emphasis on the quality and performance of higher education, its graduates and its contribution to new knowledge and innovation; higher education is considered an indicator of a nation’s global competitiveness, its ability to be attractive to mobile international investment and talent. This is especially true as governments seek to develop strategies for economic growth and recovery. Thus, higher education

is now a top policy priority for most governments, and many governments have introduced changes to their higher education and research systems to better prepare them for this new environment.

These developments are apparent in Finland, where the government has already begun to reshape the Finnish higher education landscape, leading to a smaller number of HEIs each with greater distinctiveness. It has expanded the role and responsibilities of universities of applied sciences to now include RDI that serves education, supports the world of work and regional development. In addition, new funding arrangements, with a much stronger emphasis on performance-based funding, will come into effect in 2014.

JAMK is to be commended for acknowledging these challenges but also setting an ambitious objective to be the best UAS in Finland. To help it achieve its objectives, it has reformed its internal structures and fully embraced the necessity for a quality system and culture. It has boldly opened itself up to an international audit, following in the footsteps of its previous and successful EPAS accreditation. These are important indications that JAMK is serious about its ambitions. There are many issues to be tackled, but JAMK is going about the process in the right way.

# Conclusions

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## 9.1 Strengths and good practices of the quality system

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### Strengths

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JAMK University of Applied Sciences should be justly proud of the achievements it has made since its establishment in 1994. The audit team has identified some important strengths including:

- JAMK has adopted an ambitious institutional strategy with a strong focus on quality of learning, internationalisation and entrepreneurship highlighting also the importance of RDI – and has organised its quality system in a systematic and structured way in order to help provide strategic and operational management to support these strategic objectives.
- There is strong evidence of a commitment to the JAMK quality system amongst management and all staff. There are clearly defined roles and responsibilities for different groups of staff, from senior leadership, quality management development and school quality teams, academic and support staff to students.
- JAMK's quality system, based on the continuous development idea and PDCA-model, is aligned to strategic planning, management and steering of operations; it informs procedures and processes, and generates data required for decision making, development and monitoring implementation and evaluation; strategic planning is organised in a systematic and structured way.
- JAMK has a well-established comprehensive quality system with a long history of participation in national and

international audits, reviews and benchmarking exercises. Lessons from these different exercises form part of the feedback loop, providing the basis for improvements, where necessary.

- JAMK is developing a quality culture which is based on JAMK's values, and is shared and well understood by all stakeholders. It is communicated effectively, for example, using the OTA KOPPI-CATCH slogan.
- The feedback information is systematically used to further development of the degree programmes. For example, in the sample degree programmes, international benchmarking and future forecasting have helped to improve the curriculum and strengthen the programme, and student feedback has been used to develop the content, teaching methods and research method training.
- There is good evidence of participation from key stakeholders. External stakeholder support is evident across all JAMK's activities, including involvement at both the corporate and curriculum level. There is an advisory board associated to degree programmes to ensure the curriculum continues to reflect the needs of working life.

#### Good practices

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- JAMK uses several systematic, participative methods, e.g. the Strategy Navigator-tool, to involve all stakeholders in defining its strategic objectives.
- Cross-evaluations have helped to build a common and systematic understanding of a quality culture across the entire organisation level. It is used to improve the operations and also the curricula and pedagogic practices by enhancing dissemination of good practices across degree programmes from different educational fields.
- The diversity of feedback channels, including the School of Technology's approach to collecting feedback in the middle of the semester and the student organisation JAMKO's feedback week, provide an encouraging environment for students. These initiatives have had a positive impact on students' participation in quality management activities.
- The school-level performance agreement process, with two discussion rounds and a joint seminar, enhances common understanding of the linkage between strategy and quality work as well as builds common quality culture.

- The Master's Degree Programme in Entrepreneurship and Business Competence benchmarks its quality by systematic cooperation with international partners and multidisciplinary thesis committee.
- Audit and evaluation results are carefully analysed and recommended actions are followed up through maintenance books indicating the owner, schedule and tasks to be undertaken. This monitoring system makes development responsibilities, plans, schedules and actions transparent and clear for all the stakeholders.

## 9.2 Recommendations

JAMK has established a comprehensive quality system with extensive policies and procedures. In order to reach its strategic objectives, JAMK should now go beyond its nationally-acknowledged achievements to underpin the next phase of its development. The audit team makes the following recommendations:

<b>Quality policy</b>	<ul style="list-style-type: none"> <li>▪ Despite developments since JAMK's last audit 2006, the quality system still remains process-oriented, while more emphasis should be placed on developing a deeper and shared understanding, across all its units, of educational and academic quality appropriate for a UAS operating in a competitive and international environment.</li> <li>▪ The Academic Board concentrates on ensuring conformity with quality processes but does not adopt wider responsibility for quality. Its role should be developed in order to maintain and uphold overall educational and academic quality.</li> </ul>
<b>Strategic and operations management</b>	<ul style="list-style-type: none"> <li>▪ JAMK collects a significant amount of data about its performance but level of information is inadequate for an institution wishing to operate at the international level. It should develop a comprehensive institutional research capability to provide good business intelligence, better inform strategic, operational and executive decision-making, and underpin all its activities. This should also enhance the strategic forecasting component of its quality system to help future-proof JAMK against changes nationally and internationally.</li> </ul>
<b>Development of the quality system</b>	<ul style="list-style-type: none"> <li>▪ JAMK should embed international systematic benchmarking and peer review with relevant well-recognised peer HEIs as an essential component within</li> </ul>

the PDCA cycle for all units of the organisation, including support services. This will help ensure that meeting the appropriate educational and academic standards is recognised as the core objective of the whole quality system. These processes should use mission-appropriate quantitative and qualitative indicators.

- The quality system should be developed to better support reaching the strategic targets. This should ensure active understanding and involvement of all stakeholders, including students.
- The educational leadership needs further analysis. JAMK should develop processes to assure the academic quality of curricula and a common pedagogical approach, e.g. the teaching culture and the learning environment. International benchmarking should be a formal part of development and review of degree programmes.
- To improve the effectiveness of the PLP and guarantee a coherent support of all degree students, it is recommended that JAMK ensures that every student completes his/her PLP during the first semester. This also helps to safeguard a coherent high quality student experience at JAMK covering all students.
- JAMK should conduct a research assessment exercise, using international benchmarks, at regular intervals to evaluate the quality of research outputs and impacts; the aim of this exercise would be to bring about greater awareness of the appropriate quality standards as the EPAS accreditation has done for the Degree Programme in International Business.
- JAMK should identify academic expectations, including guidelines for qualifications, competences and RDI outputs, which would form part of the annual performance review. Closer alignment between human resources policies should be developed to ensure the introduction of an appropriate recruitment, promotion, and career structure along with policies to encourage and reward achievement. Research training, for both academic staff and students, should be also required.
- Although JAMK actively involves external stakeholders in all of its activities, there is neither a systematic procedure to develop regional development activities nor a strong link to the development strategy of the region and the city. JAMK should develop a stronger and more coherent link with the development strategy of the City of Jyväskylä and the region.

## **Degree education**

## **Research, development and innovation (RDI)**

## **Societal impact and regional development work**



**Studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students' perspective**

- Entrepreneurship is one of the key pillars in JAMK's strategy but it is understood differently across the institution. JAMK should develop entrepreneurship principles to enhance a shared understanding and operational framework linked to all its activities, including teaching, RDI, internationalisation, and regional engagement.
- Systematic improvements integrated into the quality system as holistic approach for the entrepreneurship studies is needed. Better integration of the entrepreneurship services into the quality system, as well as the enhancement of management ownership and identification of responsibilities for entrepreneurship studies within the JAMK Management Team and JAMK's organisational structure, is strongly recommended.

### 9.3 The audit team's overall assessment

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The quality system of JAMK University of Applied Sciences fulfils the Finnish Higher Education Evaluation Council's criteria set for the quality system as a whole and the quality management of basic duties. None of the audit targets are at the level of absent and the quality system as a whole (audit target 6) is at the level of developing. The audit team proposes to the Finnish Higher Education Evaluation Council that JAMK University of Applied Sciences passes the audit.

### 9.4 FINHEEC's decision

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In its meeting on 27 March 2013, the Finnish Higher Education Evaluation Council (FINHEEC) decided, based on the proposal and report of the audit team, that the quality system of JAMK University of Applied Sciences meets the FINHEEC criteria for quality systems as a whole and quality management of HEI basic duties. JAMK University of Applied Sciences has been awarded a quality label that is valid for six years beginning on 27 March 2013.

Appendix 1: Table of the audit targets and criteria

TARGETS	CRITERIA		
	ABSENT	EMERGING	DEVELOPING
1. The quality policy of the higher education institution	<p>The quality system shows a complete absence of or major shortcomings in the:</p> <ul style="list-style-type: none"> <li>■ definition of the system's objectives and responsibilities</li> <li>■ knowledge and commitment of those responsible</li> <li>■ documentation of the system and the information it produces or suitable communication.</li> </ul>	<p>The quality system's objectives and responsibilities have not been clearly defined. The division of responsibility works only partially, and those responsible for the operations exhibit widely differing skill levels and commitment to their duties.</p> <p>The quality system and the information it produces are inadequately documented. The information needs of the HEI's personnel groups, students or external stakeholders are not adequately addressed in the documentation. Information produced by the system is not systematically communicated within the institution or to external stakeholders.</p>	<p>The quality system's objectives and responsibilities are clearly defined. The goal-setting process is an inclusive one. The division of responsibility functions well. The key people responsible for the operations are committed to their duties and have sufficient skills to undertake them.</p> <p>The quality system and the information it produces is documented in a clear and appropriate manner. For the most part, the information needs of the HEI's personnel groups, students and external stakeholders are taken into account in the documentation. The information produced by the system is communicated in a systematic and targeted manner within the institution and to external stakeholders.</p>
			<p>The objectives of the quality system are defined in a very clear and inclusive manner. The objectives and division of responsibility provide excellent support for the development of the institution's operations. There is clear and continuous evidence of the skill level and commitment of those responsible for the operations.</p> <p>The HEI has systematic and well-established procedures for documenting the quality system and the information it produces so that the documentation satisfies the information needs of various parties. The institution has excellent and well-established procedures for communicating information to different personnel groups, students and external stakeholders. Communication is active and up-to-date.</p>
2. Strategic and operations management	<p>The quality system shows a complete absence of or major shortcomings in the:</p> <ul style="list-style-type: none"> <li>■ links to strategic planning, management and operations management</li> <li>■ ability to meet the needs of strategic and operations management or commitment to quality work of managers involved in operations management.</li> </ul>	<p>The quality system is not sufficiently well linked to the HEI's strategic planning, management and operations management. The system and the information it produces do not serve the needs of strategic and operations management in an appropriate manner.</p> <p>The system does not serve as a meaningful management tool at all organisational levels, and managers involved in operations management show a lack of commitment to joint quality work.</p>	<p>The quality system is quite well linked to the HEI's strategic planning, management and operations management. The system and the information it produces serve strategic and operations management, and there is evidence that the information is put to use.</p> <p>In terms of management, the system works at different organisational levels, and the managers involved in operations management are committed to joint quality work.</p>
			<p>Quality management is a natural part of the HEI's strategic planning, management and operations management. The institution has systematic, well-established and excellent procedures that produce information for strategic and operations management needs, and there is clear and continuous evidence that information is put to systematic and wide use.</p>

				In terms of management, the quality system works in an excellent manner at all organisational levels, and there is clear and continuous evidence that managers involved in operations management are committed to joint quality work.
<b>3. Development of the quality system</b>	<p>The HEI shows a complete absence of or major shortcomings in the:</p> <ul style="list-style-type: none"> <li>■ procedures for evaluating or developing the quality system or overall view of the functioning of the quality system.</li> </ul>	<p>The HEI has inadequate procedures for evaluating and developing the quality system. It has a weak overall view of the functioning of the quality system. System development is not systematic.</p>	<p>The HEI has well functioning procedures for evaluating and developing the quality system. It is able to identify the system's strengths and areas in need of development, and system development is systematic.</p>	<p>The HEI has well-established and systematic procedures for evaluating and developing the system. It is able to efficiently identify the system's strengths and areas in need of development, as well as to evaluate the effectiveness of the system. There is clear and continuous evidence of the system's successful development work.</p>
<i>Follow-up section for the HEIs subject to the second FINHEEC audit:</i>	<p>The HEI shows a complete absence of or major shortcomings in:</p> <ul style="list-style-type: none"> <li>■ the development work following the first audit.</li> </ul>	<p>The development of the quality system after the first audit has not been systematic or effective.</p>	<p>The development of the quality system after the first audit has been systematic. The system works better than before.</p>	<p>After the first audit, the HEI has systematically improved the functionality and fitness for purpose of the quality system. Special attention has been given to the workload produced by the system. The system has been developed in a very successful and effective manner.</p>

<b>The fulfilment of the following criteria is reviewed separately for each basic duty and optional audit target:</b>				
<p><b>4. Quality management of the higher education institution's basic duties</b></p> <p><b>4a) Degree education</b></p> <p><b>4b) Research, development and innovation activities, as well as artistic activities</b></p> <p><b>4c) Societal impact and regional development work (incl. social responsibility, continuing education, open university and sciences education, as well as paid-services education)</b></p> <p><b>4d) Optional audit target</b></p>	<p>The quality system shows a complete absence of or major shortcomings in the:</p> <ul style="list-style-type: none"> <li>■ quality management procedures used to achieve the goals set for the operations</li> <li>■ links between goals set for the activities and the HEI's overall strategy</li> <li>■ participation of the institution's personnel groups, students or external stakeholders in the development of the operations or</li> <li>■ quality management of support services that are key to the operations.</li> </ul>	<p>The quality management procedures are not fully functional and do not support the achievement of goals set for the operations in a meaningful manner. The goals are not linked to the HEI's overall strategy.</p> <p>-----</p> <p>The quality system provides insufficient information for the quality management of the operations, and information use is sporadic and/or information collection is an end in itself.</p> <p>-----</p> <p>The personnel groups, students and external stakeholders are not involved in the development of the operations in a meaningful manner.</p> <p>-----</p> <p>The quality management of key support services is not functional.</p>	<p>Functional quality management procedures advance the development of the operations and the achievement of goals set for the operations. The objectives are mostly linked to the overall strategy of the HEI.</p> <p>-----</p> <p>The quality system produces relevant information for the quality management of the operations, and the information is used to develop the HEI's operations in a meaningful manner.</p> <p>-----</p> <p>Personnel groups and students are involved in the development of the operations in a meaningful manner. External stakeholders also participate in the development work.</p> <p>-----</p> <p>The quality management of key support services functions relatively well.</p>	<p>The HEI has systematic and well-established quality management procedures that provide excellent support for the development of the operations and the implementation of the institution's overall strategy. There is clear and continuous evidence of the system's effectiveness in achieving the goals set for the operations.</p> <p>-----</p> <p>The HEI has systematic and excellent procedures used to produce information for the quality management of the operations. Information is used systematically, and there is clear and continuous evidence to show that it is successfully used to develop the operations.</p> <p>-----</p> <p>Personnel groups and students are committed and very actively involved in developing the operations. Special attention has been given to the workload generated by the quality management procedures. External stakeholders are involved in the development work in a meaningful manner.</p> <p>-----</p> <p>The HEI has systematic and well-established procedures for the quality management of key support services. There is clear and continuous evidence that the procedures function well.</p>

<i>The fulfilment of the following criteria is reviewed separately for each degree programme:</i>				
<p><b>5. Samples of degree education: degree programmes</b></p> <p><b>Planning of education</b></p> <ul style="list-style-type: none"> <li>■ Curricula and their preparation</li> <li>■ Intended learning outcomes and their definition</li> <li>■ Links between research, development and innovation activities, as well as artistic activities, and education</li> <li>■ Lifelong learning</li> <li>■ Relevance of degrees to working life</li> <li>■ Participation of different personnel groups, students and external stakeholders.</li> </ul> <p><b>Implementation of education</b></p> <ul style="list-style-type: none"> <li>■ Teaching methods and learning environments</li> <li>■ Methods used to assess learning</li> <li>■ Students' learning and well-being</li> <li>■ Teachers' competence and occupational well-being</li> <li>■ Participation of different personnel groups, students and external stakeholders.</li> </ul> <p><b>Effectiveness of quality work</b></p> <ul style="list-style-type: none"> <li>■ Suitability of key evaluation methods and follow-up indicators and their impact on the achievement of goals.</li> </ul>	<p>The quality system shows a complete absence of or major shortcomings in the:</p> <ul style="list-style-type: none"> <li>■ quality management procedures related to the planning of education</li> <li>■ quality management procedures related to the implementation of education</li> <li>■ participation of the institution's personnel groups, students or external stakeholders in the development of the operations or effectiveness of the quality work.</li> </ul>	<p>The quality management procedures related to the planning of education are not fully functional and do not support the planning of education in a meaningful manner.</p> <p>The quality management procedures related to the implementation of education are not fully functional and do not support implementation in a meaningful manner.</p> <p>The personnel groups, students and external stakeholders are not involved in developing the operations in a meaningful manner.</p> <p>There is little evidence of the effectiveness of the quality work.</p>	<p>The quality management procedures related to the planning of education enhance the quality of planning and support planning itself.</p> <p>The quality management procedures related to the implementation of education enhance the quality of the implementation and support implementation itself.</p> <p>Personnel groups and students are involved in developing the operations in a meaningful manner. External stakeholders also participate in the development work.</p> <p>There is clear evidence of the effectiveness of the quality work.</p>	<p>The quality management procedures related to the planning of education are systematic and well-established and provide excellent support for planning.</p> <p>The quality management procedures related to the implementation of education are systematic and well-established and provide excellent support for implementation.</p> <p>Personnel groups and students are committed and very actively involved in the development of the operations. External stakeholders are also involved in the development work in a meaningful manner.</p> <p>There is clear and continuous evidence of the effectiveness of the quality work.</p>

6. The quality system as a whole	<p>The HEI has only individual and unrelated quality management procedures that do not form a structured system.</p> <p>There is no evidence of the procedures' impact on the development of the operations.</p>	<p>The quality management procedures do not form a functioning and unified system.</p> <p>The quality system encompasses some of the HEI's basic duties but does not provide meaningful support for the development of the operations. There is little evidence of the system's impact on the development of the operations.</p> <p>The institution's quality culture is only just emerging.</p>	<p>The quality management procedures constitute a functioning system.</p> <p>The quality system covers the essential parts of the basic duties of the HEI and provides meaningful support for the development of the operations. There is evidence that the system has an impact on the development of the operations.</p> <p>The development of the operations is based on an existing quality culture.</p>	<p>The quality management procedures form a dynamic and comprehensive system.</p> <p>The quality system covers all of the basic duties of the HEI and provides excellent support for the institution's overall strategy and the development of the entire institution's operations. There is clear and continuous evidence that the system has an impact on the development of the operations.</p> <p>The well-established quality culture provides excellent support for the development of the operations.</p>
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## Appendix 2: The stages and timetable of the audit process

Agreement negotiations between the HEI and FINHEEC	23 February 2012
Appointment of the audit team	24 May 2012
The HEI's audit materials and self-evaluation report submitted to FINHEEC	20 August 2012
An information and discussion event at the HEI	12 October 2012
Audit visit	13–15 November 2012
Audit decision	27 March 2013
Concluding seminar	23 April 2013
Follow up seminar, in about three years from the audit decision	Year 2016

## Appendix 3: Programme of the audit visit

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### Tuesday 13 November 2012

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9.00–10.00am	JAMK top management
10.15–11.15am	JAMK Ltd. Board of Directors
11.30am–12.30pm	Academic Board
1.30–2.30pm	School Directors
2.45–3.45pm	Teaching staff
4.00–5.00pm	Students
5.15–6.15pm	External stakeholders

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### Wednesday 14 November 2012

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9.00–10.00am	Operational Quality Management Development Team
10.15–11.15am	Bachelor's Degree Programme in Logistics Engineering: Interview with teachers Master's Degree Programme in Entrepreneurship and Business Competence: Interview with teachers
11.30am–12.30pm	Bachelor's Degree Programme in Logistics Engineering: Interview with students Master's Degree Programme in Entrepreneurship and Business Competence: Interview with students
1.30–2.30pm	Bachelor's Degree Programme in Business Administration: Interview with teachers
2.45–3.45pm	Bachelor's Degree Programme in Business Administration: Interview with students
4.00–5.00pm	Student services

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### Thursday 15 November 2012

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8.30–9.30am	RDI activities
9.45–10.30am	Studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students' perspective: interview with staff members
10.40–11.30am	Studies preparing for entrepreneurship and the promotion of innovation work and entrepreneurship from the students' perspective: interview with students
12.30–1.20pm	JAMK's regional centre of expertise: Bioenergy
1.30–2.20pm	Internationalisation
2.50–3.30pm	Final interview with JAMK top management and Quality Manager. Preliminary feedback.

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## PUBLICATIONS OF THE FINNISH HIGHER EDUCATION EVALUATION COUNCIL

- 1:2000** Lehtinen, E., Kess, P., Ståhle, P. & Urponen, K.: Tampereen yliopiston opetuksen arviointi
- 2:2000** Cohen, B., Jung, K. & Valjakka, T.: From Academy of Fine Arts to University. Same name, wider ambitions
- 3:2000** Goddard, J., Moses, I., Teichler, U., Virtanen, I. & West, P.: External Engagement and Institutional Adjustment: An Evaluation of the University of Turku
- 4:2000** Almefelt, P., Kekäle, T., Malm, K., Miikkulainen, L. & Pehu-Voima, S.: Audit of Quality Work. Swedish Polytechnic, Finland
- 5:2000** Harlio, R., Harvey, L., Mansikkamäki, J., Miikkulainen, L. & Pehu-Voima, S.: Audit of Quality Work. Central Ostrobothnia Polytechnic
- 6:2000** Moitus, S. (toim.): Yliopistokoulutuksen laatuyksiköt 2001–2003
- 7:2000** Liuhanen, A.-M. (toim.): Neljä aikuiskoulutuksen laatuyliopistoa 2001–2003
- 8:2000** Hara, V., Hyvönen, R., Myers, D. & Kangasniemi, J. (Eds.): Evaluation of Education for the Information Industry
- 9:2000** Jussila, J. & Saari, S. (Eds.): Teacher Education as a Future-moulding Factor. International Evaluation of Teacher Education in Finnish Universities
- 10:2000** Lämsä, A. & Saari, S. (toim.): Portfoliosta koulutuksen kehittämiseen. Ammatillisen opettajankoulutuksen arviointi
- 11:2000** Korkeakoulujen arviointineuvoston toimintasuunnitelma 2000–2003
- 12:2000** Finnish Higher Education Evaluation Council Action Plan for 2000–2003
- 13:2000** Huttula, T. (toim.): Ammattikorkeakoulujen koulutuksen laatuyksiköt 2000
- 14:2000** Gordon, C., Knodt, G., Lundin, R., Oger, O. & Shenton, G.: Hanken in European Comparison. EQUIS Evaluation Report
- 15:2000** Almefelt, P., Kekäle, T., Malm, K., Miikkulainen, L. & Kangasniemi, J.: Audit of Quality Work. Satakunta Polytechnic
- 16:2000** Kells, H.R., Lindqvist, O.V. & Premfors, R.: Follow-up Evaluation of the University of Vaasa. Challenges of a small regional university
- 17:2000** Mansikkamäki, J., Kekäle, T., Miikkulainen, L., Stone, J., Tolppi, V.-M. & Kangasniemi, J.: Audit of Quality Work. Tampere Polytechnic
- 18:2000** Baran, H., Gladrow, W., Klaudy, K., Locher, J. P., Toivakka, P. & Moitus, S.: Evaluation of Education and Research in Slavonic and Baltic Studies
- 19:2000** Harlio, R., Kekäle, T., Miikkulainen, L. & Kangasniemi, J.: Laatutyön auditointi. Kymenlaakson ammatti-korkeakoulu
- 20:2000** Mansikkamäki, J., Kekäle, T., Kähkönen, J., Miikkulainen, L., Mäki, M. & Kangasniemi, J.: Laatutyön auditointi. Pohjois-Savon ammattikorkeakoulu
- 21:2000** Almefelt, P., Kantola, J., Kekäle, T., Papp, I., Manninen, J. & Karppanen, T.: Audit of Quality Work. South Carelia Polytechnic
- 1:2001** Valtonen, H.: Oppimisen arviointi Sibelius-Akatemiassa
- 2:2001** Laine, I., Kilpinen, A., Lajunen, L., Pennanen, J., Stenius, M., Uronen, P. & Kekäle, T.: Maanpuolustuskorkeakoulun arviointi
- 3:2001** Vähäpassi, A. (toim.): Erikoistumisopintojen akkreditointi
- 4:2001** Baran, H., Gladrow, W., Klaudy, K., Locher, J. P., Toivakka, P. & Moitus, S.: Экспертиза образования и научно-исследовательской работы в области славистики и баллистики (Ekspertiza obrazovaniya i naučno-issledovatel'skoj raboty v oblasti slavistiki i baltistiki)
- 5:2001** Kinnunen, J.: Korkeakoulujen alueellisen vaikuttavuuden arviointi. Kriteerejä vuorovaikutteisuuden arvottamiselle
- 6:2001** Löfström, E.: Benchmarking korkeakoulujen kielenopetuksen kehittämisessä
- 7:2001** Kaartinen-Koutaniemi, M.: Korkeakouluopiskelijoiden harjoittelun kehittäminen. Helsingin yliopiston, Diakonia-ammattikorkeakoulun ja Lahden ammattikorkeakoulun benchmarking-projekti
- 8:2001** Huttula, T. (toim.): Ammattikorkeakoulujen aluekehitysvaikutuksen huippuyksiköt 2001
- 9:2001** Welander, C. (red.): Den synliga yrkeshögskolan. Ålands yrkeshögskola.
- 10:2001** Valtonen, H.: Learning Assessment at the Sibelius Academy
- 11:2001** Ponkala, O. (toim.): Terveystieteiden korkeakoulutuksen arvioinnin seuranta

- 12:2001** Miettinen, A. & Pajarre, E.: Tuotantotalouden koulutuksen arvioinnin seuranta
- 13:2001** Moitus, S., Huttu, K., Isohanni, I., Lerkkanen, J., Mielityinen, I., Talvi, U., Uusi-Rauva, E. & Vuorinen, R.: Opintojen ohjauksen arviointi korkeakouluissa
- 14:2001** Fonselius, J., Hakala, M. K. & Holm, K.: Evaluation of Mechanical Engineering Education at Universities and Polytechnics
- 15:2001** Kekäle, T. (ed.): A Human Vision with Higher Education Perspective. Institutional Evaluation of the Humanistic Polytechnic
- 1:2002** Kantola, I. (toim.): Ammattikorkeakoulun jatkotutkinnon kokeilulupahakemusten arviointi
- 2:2002** Kallio, E.: Yksilöllisiä heijastuksia. Toimiiko yliopisto-opetuksen paikallinen itsearviointi?
- 3:2002** Raivola, R., Himberg, T., Lappalainen, A., Mustonen, K. & Varmola, T.: Monta tietä maisteriksi. Yliopistojen maisteriohjelmien arviointi
- 4:2002** Nurmela-Antikainen, M., Ropo, E., Sava, I. & Skinnari, S.: Kokonaisvaltainen opettajuus. Steinerpedagogisen opettajankoulutuksen arviointi
- 5:2002** Toikka, M. & Hakkarainen, S.: Opintojen ohjauksen benchmarking tekniikan alan koulutusohjelmissa. Kymenlaakson, Mikkelin ja Pohjois-Savon ammattikorkeakoulut
- 6:2002** Kess, P., Hulkko, K., Jussila, M., Kallio, U., Larsen, S., Pohjolainen, T. & Seppälä, K.: Suomen avoin yliopisto. Avoimen yliopisto-opetuksen arviointiraportti
- 7:2002** Rantanen, T., Ellä, H., Engblom, L.-Å., Heinonen, J., Laaksovirta, T., Pohjanpalo, L., Rajamäki, T. & Woodman, J.: Evaluation of Media and Communication Studies in Higher Education in Finland
- 8:2002** Katajamäki, H., Artima, E., Hannelin, M., Kinnunen, J., Lyytinen, H. K., Oikari, A. & Tenhunen, M.-L.: Mahdollinen korkeakoulu yhteisö. Lahden korkeakouluysiköiden alueellisen vaikuttavuuden arviointi
- 9:2002** Kekäle, T. & Scheele, J.P.: With care. Institutional Evaluation of the Diaconia Polytechnic
- 10:2002** Härkönen, A., Juntunen, K. & Pyykkönen, E.-L.: Kajaanin ammattikorkeakoulun yrityspalveluiden benchmarking
- 11:2002** Katajamäki, H. (toim.): Ammattikorkeakoulut alueidensa kehittäjinä. Näkökulmia ammattikorkeakoulujen aluekehitystehtävän toteutukseen
- 12:2002** Huttula, T. (toim.): Ammattikorkeakoulujen koulutuksen laatuysiköt 2002–2003
- 13:2002** Hämäläinen, K. & Kaartinen-Koutaniemi, M. (toim.): Benchmarking korkeakoulujen kehittämisvälineenä
- 14:2002** Ylipulli-Kairala, K. & Lohiniva, V. (eds.): Development of Supervised Practice in Nurse Education. Oulu and Rovaniemi Polytechnics
- 15:2002** Löfström, E., Kantelinen, R., Johnson, E., Huhta, M., Luoma, M., Nikko, T., Korhonen, A., Penttilä, J., Jakobsson, M. & Miikkulainen, L.: Ammattikorkeakoulun kieltenopetus tienhaarassa. Kieltenopetuksen arviointi Helsingin ja Keski-Pohjanmaan ammattikorkeakouluissa
- 16:2002** Davies, L., Hietala, H., Kolehmainen, S., Parjanen, M. & Welander, C.: Audit of Quality Work. Vaasa Polytechnic
- 17:2002** Sajavaara, K., Hakkarainen, K., Henttonen, A., Niinistö, K., Pakkanen, T., Piilonen, A.-R. & Moitus, S.: Yliopistojen opiskelijavalintojen arviointi
- 18:2002** Tuomi, O. & Pakkanen, P.: Towards Excellence in Teaching. Evaluation of the Quality of Education and the Degree Programmes in the University of Helsinki
- 1:2003** Sarja, A., Atkin, B. & Holm, K.: Evaluation of Civil Engineering Education at Universities and Polytechnics
- 2:2003** Ursin, J. (toim.): Viisi aikuiskoulutuksen laatuylipistoa 2004–2006
- 3:2003** Hietala, H., Hintsanen, V., Kekäle, T., Lehto, E., Manninen, H. & Meklin, P.: Arktiset haasteet ja mahdollisuudet. Rovaniemen ammattikorkeakoulun kokonaisarviointi
- 4:2003** Varis, T. & Saari, S. (Eds.): Knowledge Society in Progress – Evaluation of the Finnish Electronic Library – FinELib
- 5:2003** Parpala, A. & Seppälä, H. (toim.): Yliopistokoulutuksen laatuysiköt 2004–2006
- 6:2003** Kettunen, P., Carlsson, C., Hukka, M., Hyppänen, T., Lyytinen, K., Mehtälä, M., Rissanen, R., Suviranta, L. & Mustonen, K.: Suomalaista kilpailukykyä liiketoimintaosaamisella. Kauppatieteiden ja liiketalouden korkeakoulutuksen arviointi
- 7:2003** Kauppi, A. & Huttula, T. (toim.): Laatu ammattikorkeakouluihin

- 8:2003** Parjanen, M.: Amerikkalaisen opiskelija-arvioinnin soveltaminen suomalaiseen yliopistoon
- 9:2003** Sarala, U. & Seppälä, H.: (toim.): Hämeen ammattikorkeakoulun kokonaisarviointi
- 10:2003** Kelly, J., Bazsa, G. & Kladis, D.: Follow-up review of the Helsinki University of Technology
- 11:2003** Goddard, J., Asheim, B., Cronberg, T. & Virtanen, I.: Learning Regional Engagement. A Re-evaluation of the Third Role of Eastern Finland universities
- 12:2003** Impiö, I., Laiho, U.-M., Mäki, M., Salminen, H., Ruoho, K., Toikka, M. & Vartiainen, P.: Ammatti-korkeakoulut aluekehittäjinä. Ammattikorkeakoulujen aluekehitysvaikutuksen huippuyksiköt 2003–2004
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- 14:2003** Kantola, I. (toim.): Harjoittelun ja työelämäprojektien benchmarking
- 15:2003** Ala-Vähälä, T.: Hollannin peili. Ammattikorkeakoulujen master-tutkinnot ja laadunvarmistus
- 16:2003** Goddard, J., Teichler, U., Virtanen, I., West, P. & Puukka, J.: Progressing external engagement. A re-evaluation of the third role of the University of Turku
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- 2:2004** Ekholm, L., Stenius, M., Huldin, H., Julkunen, I., Parkkonen, J., Löfström, E., Metsä, K.: NOVA ARCADIA – Sammanhållning, decentralisering, gränsöverskridande. Helhetsutvärdering av Arcada – Nylands svenska yrkeshögskola 2003
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- 4:2004** Rauhala, P., Karjalainen, A., Lämsä, A.-M., Valkonen, A., Vänskä, A. & Seppälä, H.: Strategiasta koulutuksen laatuun. Turun ammattikorkeakoulun kokonaisarviointi
- 5:2004** Murto, L., Rautniemi, L., Fredriksson, K., Ikonen, S., Mäntysaari, M., Niemi, L., Paldanius, K., Parkkinen, T., Tulva, T., Ylönen, F. & Saari, S.: Eettisyyttä, elastisuutta ja elämää. Yliopistojen sosiaalisuutta ja ammattikorkeakoulujen sosiaalialan arviointi yhteistyössä työelämän kanssa
- 6:2004** Stähle, P., Hämäläinen, K., Laiho, K., Lietoila, A., Roiha, J., Weiho, U. & Seppälä, H.: Tehokas järjestelmä – elävä dialogi. Helian laatutyön auditointi
- 7:2004** Korkeakoulujen arviointineuvoston toimintakertomus 2000–2003
- 8:2004** Luopajarvi, T., Hauta-aho, H., Karttunen, P., Markkula, M., Mutka, U. & Seppälä, H.: Perämerenkaaren ammattikorkeakoulu? Kemi-Tornion ammattikorkeakoulun kokonaisarviointi
- 9:2004** Moitus, S. & Seppälä, H.: Mitä hyötyä arvioinneista? Selvitys Korkeakoulujen arviointineuvoston 1997–2003 toteuttamien koulutusala-arviointien käytöstä
- 10:2004** Moitus, S. & Saari, S.: Menetelmistä kehittämiseen. Korkeakoulujen arviointineuvoston arviointimenetelmät vuosina 1996–2003
- 11:2004** Pratt, J., Kekäle, T., Maassen, P., Papp, I., Perellon, J. & Uitti, M.: Equal, but Different – An Evaluation of the Postgraduate Studies and Degrees in Polytechnics – Final Report
- 1:2005** Niinikoski, S. (toim.): Benchmarking tutkintorakennetyön työkaluna
- 2:2005** Ala-Vähälä, T.: Korkeakoulutuksen ulkoisen laadunvarmistuksen järjestelmät Ranskassa
- 3:2005** Salminen, H. & Kajaste, M. (toim.): Laatu, innovatiivisuutta ja proaktiivisuutta. Ammattikorkeakoulujen koulutuksen laatuysiköt 2005–2006
- 4:2005** Korkeakoulujen laadunvarmistusjärjestelmien auditointi. Auditointikäsikirja vuosille 2005–2007
- 5:2005** Auditering av högskolornas kvalitetssäkringssystem. Auditeringshandbok för åren 2005–2007
- 1:2006** Dill, D.D., Mitra, S. K., Siggaard Jensen, H., Lehtinen, E., Mäkelä, T., Parpala, A., Pohjola, H., Ritter, M.A. & Saari, S.: PhD Training and the Knowledge-Based Society. An Evaluation of Doctoral Education in Finland
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- 3:2006** Kekäle, T., Ilolaks, A., Katajavuori, N., Toikka, M. & Isoaho, K.: Kuopion yliopiston laadunvarmistus-järjestelmän auditointi

- 4:2006** Audits of Quality Assurance Systems of Finnish Higher Education Institutions. Audit Manual for 2005–2007
- 5:2006** Rauhala, P., Kotila, H., Linko, L., Mulari, O., Rautonen, M. & Moitus, S.; Keski-Pohjanmaan ammattikorkeakoulun laadunvarmistusjärjestelmän auditointi
- 6:2006** Hämäläinen, K., Kantola, I., Marttinen, R., Meriläinen, M., Mäki, M. & Isoaho, K.: Jyväskylän ammattikorkeakoulun laadunvarmistusjärjestelmän auditointi
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- 8:2006** Yliopistokoulutuksen laatuysiköt 2007–2009
- 9:2006** Ojala, I. & Vartiainen, P.: Kolmen yliopiston opetuksen kehittämistoiminnan vaikuttavuus. Lapin yliopiston, Lappeenrannan teknillisen yliopiston ja Vaasan yliopiston opetuksen kehittämistoiminnan vaikuttavuuden benchmarking-arviointi
- 10:2006** Lappalainen, M. & Luoto, L.: Opetussuunnitelmaprosessit yliopistoissa
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