



State-of-the-Art report of industry requirements

Alexander Karapidis, Till Becker, Walter Ganz, Gerd Gidion, Sybille Hermann, Heike Hufnagel, Andreas Kaibel, Tomaž Klobučar, Oliver Korn, Lucia Pannese, et al.

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PROLEARN

European Commission Sixth Framework Project (IST-507310)

Deliverable 8.7 **State-of-the-Art report of industry requirements**

Report based on analyzed and verified requirements in the area of professional training and qualification

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3	04-04-05	Karapidis	Re-design in some sections according to the review meeting comments
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6	06-30-05	Karapidis	Final reworked version
7	12-22-06	Karapidis	Modified conclusions including results + taking results from D8.13 (lead by JSI) into account

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Abstract:

As an outcome of the requirement analysis in different deliverables, this report stresses on the importance of recent and future industry requirements in professional learning, training and qualification issues. By focusing on the verification of already analyzed requirements from different sources (studies, desk research, expert interviews, workshops) in the PROLEARN Virtual Competence Centre, a study based on the results of these activities has been made. Based on the study results, the importance of different industry demands will be illustrated and evaluated in the conclusions of this report for the benefit of a more effective supply of information and services to industry by the PROLEARN Virtual Competence Centre.

1 Introduction

This report presents the final results of the requirements from industry in the area of professional training and qualification conducted as part of the PROLEARN network of excellence project, in WP8 "PROLEARN Virtual Competence Centre" (VCC).

To build up alliances between industry and research in the context of the PROLEARN Virtual Competence Centre, the requirements are the basis of various activities initialized by the PROLEARN VCC:

- To identify challenges in the field of technology-enhanced learning and qualification.
- To define future research activities.
- To provide specific offers to address research and industry in an appropriate way.
- To understand industry needs in learning, qualification and training issues in a better way.

The information collected in this deliverable are based on ...

- ...experiences of the different companies and intermediary organizations in PROLEARN which were analyzed in several workshops of the PROLEARN VCC. Additionally the research perspective is included in these activities.
- ...studies analyzed and expert interviews have been made in the context of the requirement analysis in D8.6.
- ...the PROLEARN survey addressing industry and research from different branches according to the requirements already analyzed in D8.6 in two aspects: the requirements according to specific areas today and in three years from now.

The results of this report are outlined in two parts:

The first part describes the results of the PROLEARN survey. Thus, the outcomes illustrate to which extent the requirements of D8.6 are valid for today and in three years from the perspective of the PROLEARN survey participants.

The second part deals with the results for industry and research according to future requirements and impacts. That means, the conclusion can be used to improve the "industry meets research" transfer activities on the content level.

To sum up, this report answers two questions:

- Which requirements on an aggregate level are important for today and tomorrow?
- Which requirement topics will raise their importance in the next years?

The major activities in this deliverable have been done mainly in 2005. Privacy issues and data protection has not been covered in this study.

Nevertheless, technology-enhanced learning is becoming more and more complex which results into new data protection and privacy requirements for authors and learning content providers.

So, the Jožef Stefan Institute (JSI), Slovenia together with two Fraunhofer institutes (FIT/ IAO) made a study with the focus on “Requirements collection and analysis with focus on privacy and security issues” in 2006.

The methodology and the findings of this study can be found in D8.13 provided in Month 36. The major findings of the work done in 2006 are also integrated in the conclusions in chapter 5 of this deliverable.

1.1 Description of work

In chapter two, the outcomes of the requirement analysis in D8.6 are illustrated on a high aggregate level to show which areas of professional training and qualification issues the requirements are targeting at.

In chapter three and four, the trend study on professional training and qualification issues based on the requirements will be outlined. Referring to the concept of the study, the results will be presented on different levels. First, on the level of requirements of today and tomorrow of all the participants, and second on the requirements of research in comparison to industry of today and tomorrow.

Chapter five summarizes the conclusions which can be used for the identification of benefit, e.g. for a more effective transfer between research and economy especially on the content level. Also the findings of the requirement study with focus on privacy and security issues are integrated in this chapter.

2 Requirements from research and industry in professional learning and qualification based on deliverable D8.6

In this chapter industry requirements from deliverable D8.6 are outlined. By analysing studies in the area of professional learning in companies focusing on industry requirements, different countries and branches are addressed in these activities.

The aggregation of industry requirements helps to cluster them on a thematic level. For these purposes towards requirements valid for the majority of European industry, country-specific issues and topics are not taken into account within the following illustrations. So, the main demands from industry are listed below.

2.1 Common demands

2.1.1 Demand for more market transparency in professional training

Market transparency means that companies, especially end-users suffer from an information gap regarding their suppliers and their product or services in such a way that they can compare them.

2.2.1 Demand for the ability to estimate future activities in e-learning

Ability to estimate future activities in e-learning means to recognize and understand new future solutions and to evaluate if they might be appropriate to implement in a specific company (organisational issues, technical issues, HR issues). So, to enable companies in this demand means to give them the ability to e.g. make-or-buy decisions, rapidly support new solutions.

2.3.1 Demand for standardisation vs. customization

On the one hand, companies have a high demand for solutions that are transparent, reliable and not too expensive. On the other hand there is a high demand for solutions that should be customized perfectly for the companies' requirements. So, the cause-and-effect of investment and benefit for the performance of the company by professional learning activities is still open and hard to evaluate.

2.4.1 Demand for an (single) information pool

The demands of an (single) information source about professional training tasks is highly requested in content tasks, in service tasks and in infrastructure tasks. The main demands mentioned here are:

- Access to a network with easy-to-find project information in professional learning
- Ability to interlink with partners and experts to run projects and/or get their expertise
- Brokerage between supply and demand
- Easy access (no installing of programs etc.) to join an information pool
- Lessons learned or common practices scenarios (users and suppliers) can learn from

- Services (e.g. seminars/workshops in-house and extern) and products (tools, etc.) in professional learning that are offered transparently
- Consulting for companies about implementation strategies for e-learning etc.
- Quickly find links to already-existing online data bases for professional learning

2.5.1 Demand for quality e-learning products and services

Many providers of solutions in professional training on the market sell very similar products and services. So, the main question is whom to trust. The demand mainly targets at the quality of solutions offered. Many standards, certifications etc. have been developed here e.g. on technical aspects. But they are, for the majority of companies as end-users, not understandable, unclear or not trustful. Additionally, questions about references, seals of approvals, company size, company location (headquarter), length of time in business etc. could also be first criteria to decide, from which company a product or a service will be purchased.

2.6.1 Demand for content-orientation

Demand for clarification, on which level and for which purpose the solution could be used is still an issue in many companies. So different levels might include:

- Support to advance in position
- Vocational and occupational re-training
- Adjustment to a new job
- Provide staff for new tasks

2.7.1 Demand for specific professional learning tasks

Demands for specific professional training tasks are requested in nearly all areas of companies. Main demands are:

- Management of staff
- Marketing & Distribution
- Communication
- Product management
- Quality management
- Cost management
- Human Resource Management
- Environment protection
- Train the trainer
- Languages and intercultural training
- Computer applications
- Corporate culture
- Office organisation
- Law

2.8.1 Demand for potential user groups

Demands for the preparation of specific user groups in companies to perform on a higher level are still requested and suffers from a lack of solutions and services. Specific user groups mentioned include:

- Training opportunities for younger staff of a large range of different training places must be provided in vocations which are compatible with different abilities and interests
- Maintaining employability through continuing education and training by gaining qualifications at a later stage to improve quality, transparency and professionalism
- Equal opportunities for women in training and employment with professional learning in respect of gender issues
- Equal opportunities for migrants in training and employment concepts and methods required to integrate migrants faster and more professional in work processes
- Making use of the employment and qualification potential of older people. A consequence of the demographic change which Germany and other industrialised nations are experiencing is that the number of under-30s will drop by 25% by 2020. It is even more important, however, for companies to develop personnel and training with foresight and for this to be backed up by a preventive training and employment policy, which spans the entire working life in order to avoid the emergence of age-related training and performance deficits and to optimally combine the strong points of younger employees

2.9.1 Demand for globalisation of e-learning activities

E-learning activity enlargement vocational and occupational e-learning activities globalise more and more by service providers and by companies under respect of intercultural qualification issues. So, the main demand lies in barrier free systems, methods and solutions that allow especially global players one single solution for their needs.

2.1 Conclusion

The demands described above are the main results analyzed in deliverable D8.6. To prove which of the industry requirements discovered are of highest priority and which demands will be more important in the future, verification on the empirical base will be one appropriate way.

In other words: To strengthen the effectiveness of the activities in the PROLEARN Virtual Competence Centre, it is critical for success to know, which needs of industry should be supplied. So, the demands described above could be used as a basis to build the questionnaire as a trend study named "Development in TEL issues".

3 Trend study “Development in TEL issues”

A questionnaire-based survey is a powerful evaluation tool and should not be taken lightly. It is important to remember that a survey should be viewed as a multi-stage process beginning with the definition of relevant aspects to be examined and ending with an interpretation of the results, based on empirical rule sets and proven by statistical methods. In the following paragraphs the trend survey characteristics will be outlined.

3.1 Survey type

The trend survey is based on a written questionnaire with privacy protection for the participants (only country and target group information is available about them). Questions are designed to gather quantitative data in closed format questions. We decided to use this kind of questions to filter out useless or extreme answers faster than might occur in an open format question.

3.1 Objectives of the survey

The importance of well-defined objectives cannot be over emphasized. The survey contains topics and issues related to professional learning, identified in the activities for D8.6. (see chapter 2). It is conceptualised as a first quantitative overview study about the future trends according to industry needs. It is NOT a detailed study to identify new trends.

The main objectives of the survey are to verify two research questions based on the requirement analysis results described above:

- Which requirements in professional training, qualification and learning are important for today and tomorrow?
- Which requirement topics will raise their importance in the next years?

The thematic objectives are developed according to the demands from industry in the following areas: Market transparency, Estimating future activities in e-learning, Standardisation vs. customization, Information pool, Quality of e-learning products and service, Content-orientation, Specific professional learning tasks, Potential user groups and Globalization of e-learning activities.

3.1 Population, survey period, distribution and return rate

3.1.1 Population/sample

The target groups addressed are actors in the area of professional training, qualification and learning, from industry (companies as end-users, providers of professional learning, qualification and training products and services) and research institutes and universities.

The population includes all the members in PROLEARN and online community members registered in the PROLEARN Virtual Competence Centre. Furthermore, additional actors from research and economy are addressed. Altogether, 608 potential

actors from research and economy mainly from European countries have been addressed. The study is not representative for all companies or research institutes in Europe, but the results are a captured mood of the participants towards the topic fields based on the demands already analyzed.

As the participants were assured of the anonymity of the survey, there will not be a list of contributing participants in this deliverable.

3.2.1 Survey period

The trend study was carried out from the beginning of November 2004 until the middle of March 2005.

3.3.1 Distribution

Personalized addressing via e-mail. In addition, the questionnaire was free to download in the public area of the PROLEARN Virtual Competence Centre and on other platforms, websites and portals from PROLEARN associated partners from research and industry.

3.4.1 Return rate

Finally, 150 participants contributed to the survey, so that the return rate amounted to 24.5%.

3.1 Data collection

The data collection in the questionnaire was parted into six sections; each of them contains questions about the situation today and estimation about what it will be look like in three years.

- Section 1: Market transparency - the interviewees were asked to rate statements to the transparency in the professional training market.
- Section 2: Estimating future activities in e-learning – the question rated the importance of questions for future activities in e-learning.
- Section 3: Standardisation vs. customization – in this section the interviewees should estimate the demand of standardized and customized training products.
- Section 4: Content-orientation – interviewed persons should estimate the specific demand of training content with different thematic orientations.
- Section 5: Potential user groups – in this section a rating of the importance of professional training for different potential user groups was analysed.
- Section 6: Specific professional learning tasks - one should rate the importance of specific professional learning tasks here.

3.1 Data analysis

In the data analysis, the following steps have been made:

- Adjustment and consistent tests of data

- Generate frequencies of all questions with the aim to see, which characteristic each trend has
- Compare frequencies pair-wise (trend today and in three years) with the aim to identify gaps to show if the estimated development will increase, decrease or last on the same level
- Filter pair-wise comparison with the break variables country/ company or research institute with the aim to identify differences between countries and between research institutes and companies

In the following chapter, the results of the trend study will be shown.

4 Results of the trend study

In the following, the results of the trend study will be described. First of all, the participating countries are shown and the target groups where the interviewees belong to are outlined in a table.

The second part of the report displays how many participants of the trend study are from research and how many are from economy.

In the next step, the main results are outlined. The main results are partitioned in four paragraphs. Each paragraph is structured in the same way, i.e. the presentation of the results follows the composition of the questionnaire. That means that these paragraphs outline the results in the trends study according to the six thematic sections on different levels:

- The importance of each requirement section for today compared with the importance of each requirement section for tomorrow according to the responses of all survey participants
- Comparison of each thematic section for economy only
- Comparison of each thematic section for research only
- Differences between research and economy in the estimations of the six requirement sections

For illustrating each question, a chart is added, showing both the answers for the situation today and the estimation of what it will be like in three years. So a direct comparison of the given answers to respective questions is possible and a development at a glance is apparent. The charts for the single questions can be found in annex II.

4.1 Participating countries in the trend study

The completed questionnaires came from all over the world, e.g. China and India. But as the focus was laid on Europe, most of the participants of the trend study came from Europe. The variation between the participating countries is very high. That means participants from 28 different countries answered the questionnaire. Most questionnaires came from Germany (36), but participants from Romania were also very interested in contributing to the trend study with 18 completed questionnaires. Greece, Australia and Austria participated also quite actively. Due to the high variation, the trend study is a good but a non-representative cross section of Europe.

Participants from European countries (geographical)		Percentage
N= 150	Germany	24,2
	Romania	12,1
	Greece	6,7
	Austria	6,0
	Belgium	4,7
	France	4,0
	Switzerland	4,0
	Great Britain	3,4
	Czech Republic	2,7
	Spain	2,7
	Netherlands	2,7

Participants from non-European countries		Percentage
	China	2,0
	USA	1,3
	Canada	1,3
	India	0,7
	Egypt	0,7
	Australia	6,7
	Total	100,0

	Bulgaria	2,7
	Sweden	2,7
	Serbia	1,3
	Italy	1,3
	Slovenia	1,3
	Ukraine	1,3
	Estonia	1,3
	Portugal	0,7
	Iceland	0,7
	Ireland	0,7
	Finland	0,7
	Total	100,0

4.1 Participants from research and economy

Although industry and research were addressed, the majority of questionnaires came from research. 80,5% of all participants are researcher, 18,1% are from industry. Interviewees from other organisations, such as intermediary organisations are even more rarely: only 1,3% of all respondents belong to this group.

Research Institute vs. Business Company		percentage
N=150	Research institute	80,5
	Business company	18,1
	other organisations	1,3
	Total	100,0

4.1 Data analysis and evaluation of the pair wise comparison of frequencies from today and in the future (three years from now)

Generally speaking, one apparent trend can be seen when comparing the answers given for the question: "How the situation is today and what it will be like in three years from now?". The importance of many of the issues addressed in the questionnaire increases evidently.

Subsequently, first the importance of the different requirement sections will be shown and evaluated. Next, based on the results of each question per requirement section an aggregated evaluation of the results will be illustrated. Detailed analyse of single questions are presented in annex II.

4.1.1 Importance of different requirement sections for today and in three years from now on







Ranking	Section today	Ranking	Section in three years	Change in 3 years
1	Estimating future activities in e-learning	1	Estimating future activities in e-learning	
2	Specific professional learning tasks	2	Content-orientation	
3	Potential user groups	3	Potential user groups	
4	Content-orientation	4	Specific professional learning tasks	
5	Standardisation vs. customization	5	Standardisation vs. customization	
6	Market transparency	6	Market transparency	

Table: Ranking of the demands of all participants today and in three years

This table outlines the importance of the different requirement sections for today and in three years by the estimation of all the participants in the trend study. Overall the changes in the relevance of the requirement sections are quite low. “Estimating future activities in e-learning” is ranked at the top while, “market transparency” is ranked last. That means to recognize and understand future solutions and to evaluate if they are appropriate for customers purposes is the main demand to be solved.

By focusing on priority changes in the future, the demand to clarify on which level a solution can be used in a company (requirement section content-orientation) increases. A decrease is estimated for specific professional learning tasks especially in the area of “office organisation” and “law”. The other requirement sections have the same relevance for the trend study participants today and in three years.

4.2.1 Results of the different requirement sections today and in three years from now on

4.2.1 Section 1 - Market transparency

Today, survey participants see low demands in receiving information about suppliers, their products and their services. This demand is estimated as difficult by only one quarter of the participants.

Furthermore, the interviewees estimate that “market transparency” will be much easier to cope with in three years than it is today. Information about the suppliers, their

products and services (12%) as well as the ability of customers to compare training products in the market (29,8%) decrease significantly.

That means suppliers as well as customers might benefit from a higher transparency: Customers are enabled to compare solutions and tools more easily. So they can decide in a better way which solutions are more appropriate to their needs. Suppliers are more encouraged to improve their product strategy by focusing on the unique selling points of their solutions. Also product families can be developed in a better way in having a better understanding of solutions offered by competitors.

4..2.2 Section 2 - Estimating future activities in e-learning

“Estimating future activities in e-learning” is the requirement sector with the highest priority of all requirements analyzed. The importance estimated by all the participants nearly reached 90% for both demand fields: the importance of forthcoming solutions and developments in the training market and the cost-benefit analysis to implement solutions. The estimation of the participants about changes in three years from now on in these demand fields is minor.

That means high priority should be given to ability to evaluate if new solutions fit for company needs out of a technical, organizational and content point of view.

4..2.3 Section 3 - Standardisation vs. customisation

In this requirement section an obvious increase of the demand can be noticed. Interviewees estimated that both the demand of standardised and customised products and solutions will increase within the next three years. Furthermore the demand for customised products is seen as even higher than for standardised ones. As a result, there is no trend to identify in the estimation of all participants of the survey for one of these developments. This is not astonishing, because potential customers of products could not decide properly, if an 80% high-standardized solution to satisfy their need is more appropriate than a highly-customized 99% solution satisfying solution, which suffers from many incompatibilities or other disadvantages in the long run. An additional variable shows that the cause-and-effect of investment and benefit for the performance of the company will also be significantly higher in three years. So, this might be a first step not only to take care of the solution itself but also have a closer look on the follow-up costs of implementing tools, products and services in professional training and qualification.

4..2.4 Section 4 - Content-orientation

The participants of the trend study estimate that the content-orientation will play a more important role in three years from now in the area of professional learning. The interviewees estimate a clear rise of the demand of all four items asked, i.e. support to advance in workplace position, vocational and occupational training, adjustment to a new job and provision of staff for new working tasks. These results correspond with the findings in paragraph 4.3.2.2. That means, without having the ability to know which solution will be appropriate to specific needs and without knowing what content should be improved in which way, actors have a major problem in deciding, which tools, solutions and in the end which providers are appropriate to their needs.

4..2.5 Section 5 - Potential user groups:

All potential user groups (young staff, elderly employees, women, migrants) gain in importance in the expectations of the trend study participants. Although the importance for today varies quite strongly, in three years all the interviewees will be of high relevance for the professional learning area. So the participants regard e.g. training

opportunities for young staff today as very important (75,5%), but the use of the employment and qualification potential of older people only as casual importance (33,8%). This correlates with findings in studies dealing with the demographic change in Europe. So, the awareness that in 30 years employees are on the average 10 years older than today is still not widespread. So, especially this user group will come in the focus from competence in the upcoming years.

4.2.6 Section 6 - Specific professional learning tasks:

Nearly in all professional learning tasks the interviewees estimate an increase in the importance of these tasks in the next three years. That means that the tasks like management of staff, marketing & distribution, communication, train the trainer, etc. will be an ongoing requirement with high priority to find solutions for.

4.1 Data analysis and evaluation of differences within the economy between today and in three years

In this chapter the results from the trend study participants from economy will be outlined. Because of the relatively small number of participants from economy, these results should be evaluated carefully.

4.1.1 Importance of different requirement sections for today and in three years within the economy







Ranking	Section today	Ranking	Section in three years	Change in 3 years
1	Estimating future activities in e-learning	1	Estimating future activities in e-learning	
2	Specific professional learning tasks	2	Potential user groups	
3	Potential user groups	3	Content-orientation	
4	Content-orientation	4	Specific professional learning tasks	
5	Standardisation vs. customization	5	Standardisation vs. customization	
6	Market transparency	6	Market transparency	

Table: Ranking of the demands of participants from economy today and in three years

This table shows the ranking of the requirements sections from the point of view of the participants from the economy. What is apparent here is that participants from economy, in comparison to all the interviewees, see a higher change in the requirements sections.

“Estimating future activities in e-learning” is estimated by the trend study participants the most important section requirement today as well as in three years. Interviewees from the economy value the demands for the preparation of “Potential user groups” higher and as a more important requirement in future. That means, within the trend study participants from economy the need for solutions permitting user groups to perform on a higher level as quite high today and will become even more relevant in three years.

“Content-orientation” is regarded as more important in three years than it is today. “Specific professional learning tasks” are ranked lower, which doesn’t mean, that these become less relevant for the economy, but that other requirements are estimated to be more important.

4.2.1 Results of the different requirement sections today and in three years within economy

4..2.1 Section 1 - Market transparency

In contrast to the analyzed demands in the requirement study industry participants do not see a high difficulty in receiving information about suppliers and their products or services today. Only 22% of the industry participants see this as a difficult problem. Moreover, 37% think that it is easy to get access to such information.

The industry participants of the trend study estimate, that the market transparency in three years will be much more transparent for their customers than it is today. Both questions in this section show an increasing tendency, but receiving information about services and products offered on the market is seen even easier than comparing them. A significant shift in the estimation of the participants from economy can be seen in comparing products and solutions today only 3,7% say that customers can compare products easily, but in three years 50% of the participants estimate that a comparison will be much easier.

4..2.2 Section 2 - Estimating future activities in e-learning

Industry participants see a very high priority in having information about future activities in e-learning (81,5% today same in three years) as well as cost-benefit analysis of investment in e-learning solutions (96,3% today same in three years). From an industry participants` perspective of the study this is not unusual, because it illustrates market-economical view towards their core business topics and the pricing models of their products.

4..2.3 Section 3 - Standardisation vs. customisation

The industry participants of the trend study estimate, that the majority of demands for customized products and services (73,1%) is today much higher then for standardized products and services (24%). Also in this requirement section an increase can be observed in the estimations of the industry participants in three years from now on. Both the demand for standardised products (44,4%) and that for customised products (96,3) rise. That means the results gained cannot be evaluated as a trend against standardisation or customization of training products, but the extreme high voting for nearly 100% customized training products is comparable to other branches, where current developments show a trend towards high customized products and services (e.g. machine industry).

4..2.4 Section 4 - Content-orientation

Based on the estimations of the industry participants of the trend study today, the demands in the specific fields aggregated in the content-orientation section are not dramatically high: Support to advance in position (38,5%), vocational and occupational re-training (50%) and providing staff for new tasks (42,3%) are compared to results in other requirement sections not dramatically high. Only adjustment to a new job with 63% is a more critical demand in this section.

In contrast to the results measured today, the estimations of the participants differ significantly in three years from now: in support to advance in position (80%), in occupational and vocational re-training (70,8%) and in adjustment to a new job (84,6%) the demand increases strongly against the values made before. Only the field providing staff for new tasks (72,0%) has a less strong increase. So, this requirement section seems to change its priority more obviously and should be taken into account for the benefit of new developments and solutions in companies.

4..2.5 Section 5 - Potential user groups

Today, in the requirement section stressed on the preparation of specific user groups in companies, the industry participants see in one of five fields a low demand in two fields a medium demand and a high demand in the other two sections: A high demand is stressed training opportunities for young staff (77,8%) and maintaining employability at a later stage (70,4%). A medium demand can be seen in the fields of equal opportunities for woman (55,6%) and for migrants (57,7%). A low demand is estimated in the field of employment and qualification of older people (25,9%).

By focusing on future estimations of the industry participants, all fields in the demand sections gain in importance significantly: Training opportunities for young staff (92,3%), maintaining employability at a later stage (84,6%), equal opportunities for women (80,8%), for migrants (65,4%) and for older people (69,2%) are in high-increase in this requirement section. Especially the field of using the employment and qualification potential of older people increased strongly. Is it a piece of evidence that the demographic factor is swapping in companies as a field of action for providers to provide solutions and for companies as end-users to engage this challenge?

4..2.6 Section 6 - Specific professional learning tasks

Specific professional training tasks are numerous and vary from each other in many aspects. In the demand section “specific professional learning tasks” the industry participants showed in principle the same voting pattern than in the other five sections before: A rise of the importance of the fields in the next three years from now on. The industry participants of the trend study estimate that today, demands for office organization (34,6%), training in the thematic area of law (29,2%) and train the trainer (44,4%) are comparably low. In contrast the demands for communication tasks (84,6%), quality management (84,6%) and cost management (74,1%) are of high-priority. So, improving soft skills with professional training, learning and qualification solutions is seen as a major challenge today as well as management issues in the triangle between time – cost – quality of the companies` performance.

Focusing on future estimations of the industry participants, marketing & distribution (92%), communication tasks (92,3%), quality management (96,2%) and cost management (88,5%) has the highest priority. Only office organisation (38,5%) and training in the thematic area of low (50%) are less important demands. Train the trainer (73,1%) nearly doubled its importance in the estimation of the industry participants.

That means according to the evaluation of the results in this demand section do not differ significantly. Also the strong increase of the importance of train the trainer can be a piece of evidence that in-house training and qualification activities gain importance against external training providers.

Additional results measured in this requirement section can be found in annex II.

4.1 Data analysis and evaluation of differences between today and in three years within research

In this chapter the results of the trend study participants from research will be outlined.

4.1.1 Importance of different requirement sections for today and in three years within research







Ranking	Section today	Ranking	Section in three years	Change in 3 years
1	Estimating future activities in e-learning	1	Estimating future activities in e-learning	
2	Specific professional learning tasks	2	Content-orientation	
3	Potential user groups	3	Potential user groups	
4	Content-orientation	4	Specific professional learning tasks	
5	Standardisation vs. customization	5	Standardisation vs. customization	
6	Market transparency	6	Market transparency	

Table: Ranking of the demands of participants from research today and in three years

The rating of the requirement sections within research, shows that in the estimation within the scientific area the requirements in professional learning and qualification do not change drastically.

Like the participants from the economy, also researchers regard “Estimating future activities in e-learning” as the most important demand and “Standardisation vs. customisation” and “Market transparency” as those section with the lowest relevance.

Researchers rated the “content-orientation” today as quite low. But in their estimation for in three years this section gains importance and is ranked as a second place priority. The demand for “Specific professional learning tasks” becomes less relevant.

That means, researchers see the demand for aspects such as support to advance in position, vocational and occupational training, adjustment to a new job as even growing in the following three years. Whereas aspects like computer applications or corporate culture are less relevant in their point of view.

4.2.1 Results of the different requirement sections for today and in three years within research

4..2.1 Section 1- Market transparency

Participants from research do not see a high difficulty (25,9%) to receive information about suppliers and their products. More critical seen is the opportunity for customers to compare their products from training markets (53%). Compared with the estimations of the researchers in three years from now on, in both fields of the demand section “market transparency” an strong increase towards an easier access to information of suppliers (59,6%) and comparison of their products (38,9%). Nevertheless, this is still not a convincing value and should encourage companies as providers as well as intermediary organizations in the professional training and qualification market to improve these demands from a customers’ perspective. As a result, a high market transparency and comparable products can strengthen the relationship between clients and customers in a more trustful way.

4..2.2 Section 2 - Estimating future activities in e-learning

According to participants from economy researchers see a very high priority in having information about future activities in e-learning (87,5%) as well as cost benefit analysis of investment in e-learning solutions (86,6%). Both aspects are regarded very important in the future, too. So especially applied research institutes can take responsibility for supporting companies to filter new emerging approaches in technology-enhanced professional training and qualification for the benefit of their specific needs. In fact, such a service could be a starting point to close the gap between research in economy. As a side-effect, this service might also help research institutes to allocate third-party funds.

4..2.3 Section 3 - Standardisation vs. customisation

Participants from research estimate that the demands for customized products and services (60,3%) is today much higher then for standardized products and services (33%). Within the next three years the demand on both, standardisation (62,7%) and customisation (80,2%) of services and products will increase. The results gained cannot be evaluated as a trend against standardisation or customization of training products. Nevertheless, the demand for customised training products is today regarded as higher than the demand for standardised ones, and this trend will also continue within the upcoming years.

So, one issue researchers might focus on can be to analyze in which area standardized solutions might be more appropriate then customized solutions and vice versa. Based on such results companies as end-users might understand in a better way, how to decide in implementing appropriate tools and solutions. Providers of professional training and qualification tools might also benefit from such research results in concentrating their tool development to specific customized or standardized product types.

4..2.4 Section 4 - Content-orientation

Participants from research see the demands in the specific fields aggregated in “content-orientation” section as medium: Support to advance in position (40,5%), vocational and occupational re-training (53%) and providing staff for new tasks (55,2%) are compared to results in other requirement sections not dramatically high. Except adjustment to a new job (58,6%) is a more critical issue in this section.

In contrast to the estimations of the researchers today, their views differ significantly in three years from now on: the estimations of the participants show an high increase in all four demand fields: Support to advance in position (78,9%), vocational and occupational re-training (80,5%), providing staff for new tasks (80,2%) and adjustment to a new job (84,6%) are significantly higher values then before. So, this requirement sections seems to change its priority more impressive then other sections. So for researchers, there can be found new issues to concentrate their research activities on in the future.

4..2.5 Section 5 - Potential user groups

Today, in the requirement section stressed on the preparation of specific user groups in companies, the research participants of the trend study differ in their estimation of the importance of the different demands outlined: First, in training opportunities for young staff (75,4%) and maintaining employability at a later stage (72%) a high demand is emphasised. Second, in equal opportunities for woman (58,6%) and for migrants (54,8%) a medium demand is estimated. Third, in the field of employment and qualification of older people a low demand (35,3%) is estimated.

By focusing on future estimations of the research participants of the trend study, all fields in the demand sections gain in importance and increase strongly: Training opportunities for young staff (89,9%), maintaining employability at a later stage (89,9%), equal opportunities for woman (74,1%), for migrants (74,1%) and for older people (68,1%) are in high-increase in this requirement section. According to the estimations of industry participants, the demand field of using the employment and qualification of older people increased strongly. Again, this could be an evidence that researchers are aware of the demographic factor and its impact in companies. So, especially for this user group research activities might be focused on to discover new solutions for this requirement. That means, that demographic aspects should be e.g. integrated in research proposals. Parallel, agenda-setters might strengthen such developments in creating opportunities and a framework for demographic issues in potential funding programs.

4..2.6 Section 6 – Specific professional learning tasks

Specific professional training tasks are numerous and vary from each other in many aspects. In the demand section “specific professional learning tasks”. In this requirement section the research participants showed in principle the same voting pattern then in the other five sections before: A rise of the importance of the fields in the next three years from now on. The research participants of the trend study estimate for the demands today, that office organization (45,9%), training in the thematic area of law (39,4%) and corporate culture (44,1%) are low demands. In contrast to that communication tasks (68,8%), human resource management (68,8%) and computer application (80,9%) are high-priority demands. So, improving soft skills with professional training, learning and qualification solutions is seen as a major challenge today as well as management issues in the areas of communication, human resource and computer application of the companies` performance.

Focusing on future estimations of the research participants, communication tasks (89,1%), quality management (88,9%) and human resource management (86,0%) have the highest priority. Office organisation (54,1%) and training in the thematic area of law (54,3%) are less important demands. An decrease is estimated in the field of computer application training from 80,9% to 73,7%.






Based on the results research activities should stress on training, qualification and learning methods and tools that support specific “soft skill” professional learning tasks. Especially the IT-oriented institutes and universities can improve their outcomes in the described soft skill learning tasks in building alliances with social science or economy-oriented research departments. In fact, to strengthen interdisciplinary teams might be the key to develop and create outcomes in research with an higher impact in economy and society.

Additional results measured in this requirement section can be found in annex II.

4.1 Data analysis and evaluation of differences between research and economy

In this chapter the differences between the estimations of the participants from research and economy will be illustrated.

4.1.1 Importance of different requirement sections for today and in three years – economy in comparison to research

Ranking	Section today	Ranking	Section in three years	Change in 3 years
1	Estimating future activities in e-learning (research and industry)	1	Estimating future activities in e-learning (research and industry)	
2	Specific professional learning tasks (research and industry)	2	Potential user groups (economy) Content-orientation (research)	
3	Potential user groups (research and industry)	3	Content-orientation (economy) Potential user groups (research)	
4	Content-orientation (research and industry)	4	Specific professional learning tasks (research and industry)	
5	Standardisation vs. customization (research and industry)	5	Standardisation vs. customization (research and industry)	


6	Market transparency (research and industry)	6	Market transparency (research and industry)	
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Table: Different ranking of the demands between research and economy

As can be seen in this table, there are some differences in the estimation of the requirements and their development but also some similarities.

In their estimation of the demands today the two groups agree perfectly. They ranked the six requirement sections in the absolutely same way. Researchers and economists also agreed about the first and the two last places on the ranking list, in their estimation about the situation in three years. Both groups regard “Estimating future activities in e-learning” as the most important section and “Standardisation vs. customization” and “Market transparency” as the least important ones.

Although both researcher and economists see that “Specific professional learning tasks” will not be so important anymore in three years and they rank it unanimously on the fourth place. They do not agree, however, on the placement of the 2nd and 3rd topics which need to fill the rank list. Interviewees from the economy consider “Potential user groups” 3rd place, as more important than “Content-orientation” ranked as 4th place. Whereas researchers regard the importance of these two sections the opposite way round. In their opinion “Content orientation” will be more relevant in three years than “Potential user groups”.

5 Conclusions and first call for action for the PROLEARN Virtual Competence Centre

This chapter illustrates the conclusions according to the survey results from the trend study and the data protection and privacy issues study.

5.1 Conclusions according to the trend survey results of 2005

In this report two questions / two objectives are the main focus of the trend survey activities:

- Which requirements in professional training, qualification and learning are important today and tomorrow?
- Which requirement topics will increase in importance in the next years?

The importance of the demands analysed based on the requirements that were synthesized from different studies and expert interviews (compare deliverable D8.6) is estimated to be high by the participants of the trend study. High signifies that usually more than 75% agree on the importance of the requirements asked for in the questionnaire. Moreover, the importance of the requirements will/is likely/might increase or remains constant in the next years.

By focusing on the ranking of the different requirements analysed, the demands in the sections “Content-orientation” and “Potential user groups” will be rising in the priority of the participants in the trend study within the next three years. So, for research and industry the following conclusions can be drawn:

5.1.1 Conclusions for companies as end-users

First, companies as end-users can use the ranked results to become aware of specific requirements in professional training, qualification and learning. So, the results can be used as first hints, indicating in which areas qualification, training and learning gaps might exist in their own company.

Second, high priority should be given to gaining the ability to evaluate whether new solutions fit company needs from a technical, organisational and content point of view.

Third, based on the results of the trend study, companies can see from the expected importance of specific requirement sections in the future, in which of these sections they need to look more carefully at developments in human resource management, organisational questions and external developments (e.g. market, regulations) according to professional training, learning and qualification issues.

5.2.1 Conclusions for companies as providers

For companies as providers of solutions, methods and tools in the area of professional training, learning and qualification, this study can indicate in which areas new solutions might be developed.

So, from a company’s perspective the importance of future demands can be seen as new market segments that should be provided with appropriate solutions. Providers of professional training and qualification tools might also benefit from research results in concentrating the development of their tools on specific customised and standardised product types.

Especially the areas of “Specific professional training tasks” and “Content-orientation” seem to be the most promising fields for developing new products and methods. Tasks such as management of staff, marketing & distribution, communication, train the trainer etc., are future demands with high priority calling for solutions.

Nevertheless, the requirements estimated to be the most important today should be met with tools, products and solutions most appropriate for their clients’ needs. Companies as providers will only survive in the market if their products are not only well-prepared solutions but also support companies in improving their performance significantly.

5.3.1 Conclusions for intermediary organisations

For intermediary organisations, i.e. chambers of commerce, industry associations, the trend study results of the importance of the requirement sections can be used to reflect their own offers and services provided for their members. Despite branch-specific characteristics, the results can be used as an additional source for reflecting offers in view of the usability of their members.

Especially the future importance of the analysed requirement sections can be one facet of providing themselves and their members with new challenges in the area of professional training, learning and qualification. Studies projected, e.g., by industry associations might benefit from the demands verified in this study.

Furthermore, by regarding the specific requirement sections estimated to be important in the future, intermediary organisations, in their role as information brokers can encourage their members to take care for the requirement sections and/or develop new services, methods and solutions so as to cope with these issues more adequately. As an additional service intermediary organisations might offer services in order to gain market transparency specified for their clients.

5.4.1 Conclusions for research institutes and universities

The question whether companies follow new research solutions or whether the needs of companies should be accompanied by research activities, is still one of the main issues between the “economy world” and the “research world”. Nevertheless, the results of the trend study should encourage research institutes and universities with faculties or units the field of learning, training and qualification to reflect them with their own activities. Reflection here, does not only mean discussing the methodological aspects or the empirical basis of the study, but also thinking about the impact of the study results for one’s own research activities. In fact, the question to be answered is if the research is only useful for the scientific community or if there is an impact for the economy, too. In the area of applied research demands, especially those stressed by industry, are more than hints for shifting activities for the benefit of new solutions. At any rate, the importance and the future perspective in the areas of industry requirements should be regarded with some openness on the part of university faculties and units. By concentrating on research issues the demographic factor seems to be more than a single issue. This emerging demand will be a great challenge in the next years and should be considered as a new research field, targeting nearly all branches and industry sectors in Europe. Hopefully, agenda-setters of funding programs will support such developments in creating opportunities and a framework for demographic issues in potential funding programs.

5.1 Conclusions according to the privacy issues and data protection study of 2006

This paragraph illustrates the aim and the main results of the privacy issues and data protection study of 2006. A detailed description can be found in D8.13.

The aim of this study is to collect and to evaluate requirements from industry and research in professional learning and training with focus on the area of privacy and security issues. Technology-enhanced learning is becoming more and more complex which results into new data protection and privacy requirements. This survey contributes, together with previous PROLEARN deliverable D1.5, to a collection and analysis of security and privacy requirements in technology-enhanced learning.

The results of the non-representative study present the views of different technology enhanced-learning communities (learning technology, service and content providers, end-user organisations) on certain data protection and privacy topics in TEL.

5.1.1 Conclusions according to the study results

A total of 147 people from 17 countries participated in the survey. Learning technology and service providers were represented by 67 respondents, learning content providers by 38, and end-user organisations by 42. Most participants were from German organisations. The majority of respondents represented universities and other higher educational institutions. The major findings are:

Level of data protection and privacy provision is not satisfying

The majority of training organisations that were questioned are not satisfied with the current level of data protection and privacy provision in technology enhanced professional training: When asked if they agreed with the statement “Current level of data protection and privacy provision in technology enhanced professional learning is satisfactory” only 18% of respondents agreed or strongly agreed, while 54% disagreed or strongly disagreed. Most of the surveyed organisations (77%) also believe that security and privacy related problems in TEPL will increase in the next 5 years.

Urgency of different protection provisions

Security and privacy in technology enhanced learning and training can be improved or protected by different measures. By focussing on the respondents’ opinion on the urgency of different protection measures the highest priority was given to awareness rising about potential security and privacy threats in technology-enhanced learning.

Personal data protection

One of the most important issues in technology-enhanced learning is privacy protection. In this survey 44% of respondents perceived privacy protection in terms of address and location to be urgent or very urgent. Useful concepts for the protection of the identity and personal data are anonymity and pseudonymity. 29% of respondents see the anonymous use of learning services as urgent or very urgent. Furthermore, more than 55% of end-users perceive learner tracking as a big or a very big threat.

An important requirement for learning service providers is to efficiently communicate their privacy statements to learners. 49% of participating learning service providers who answered this question have a privacy policy or privacy statement that explains learners their individual information practices and procedures. In learning organisations, learners

should be at least advised how to protect their personal data, if privacy policies are not set on an organisational level.

Single sign-on and seamless access

Interoperability in the sector of technology enhanced learning today faces the challenge of providing restricted access to services, resources, and metadata in educational applications (like repositories and digital libraries). 56% of the respondents see seamless access to learning resources as an urgent or very urgent issue.

Digital rights management

Digital rights management (DRM) plays an important role in support of learners and learning content providers in preserving intellectual property rights on the artefacts they provide. DRM is seen as an urgent or very urgent provision for TEL by 41% of respondents. Interestingly, 15% of respondent stated that DRM is not relevant for technology-enhanced learning.

Legislation

It is important that end-users know what their rights in personal data protection are. Almost half of the end-users (48%) stated that their organisations know little about personal data protection rights imposed by EU Directives, national legislation and regulation, while 41% said they know it well (24%) or very well (17%).

Awareness rising

Education is one of the most important means for increasing the level of security and privacy in technology-enhanced learning. Rising the awareness about potential threats in TEL was perceived as the most urgent measure by survey respondents (mean value: 3.73). More than half of the respondents (57%) see it as urgent or very urgent.

5.1 Call for action for the PROLEARN Virtual Competence Centre based on the conclusions

The results of the trend study as well as the results of the data protection and privacy issues study are seen as an additional source for a better understanding of the specific needs of the target groups addressed in the PROLEARN VCC. In order to address them more adequately with information, communication and cooperation services provided by the PROLEARN VCC, the following results and conclusions of the trend study will be transferred into action first.

Based on the results drawn, the following actions will be a part of the activities in the PROLEARN Virtual Competence Centre for the benefit of both industry and research:

- According to the importance of the demands today and in the future, it is critical for success for the PROLEARN VCC activities to provide information according to the demands customised for each target group. So, the PROLEARN network of excellence should take care of specific offers in requirement areas estimated

to be high or difficult to access. The following requirements should therefore be satisfied first:

- Estimating future activities in e-learning (2.1.2)
- Content-orientation (2.1.6)
- To start a discussion of specific issues in this requirement section, the following action could be a starting point for creating bridges between research and industry to build up an awareness for new solutions:
 - The forum channel in the PROLEARN community and management system should be used. So, first issues can be discussed in this public communication channel about estimated future activities in e-learning, new solutions that emerge and to understand these solutions in discussions with other community members. Also the discussion about privacy issues and data protection especially in the area of awareness building could be deepened here. So, activities like trends affecting professional learning could also be discussed in this area of the VCC.
 - Polls and studies should be launched to reveal additional information about future activities in TEL in different branches, countries, companies etc. Other issues should continuously be answered in more detail, for example, on which level and for which purpose a solution could be used. Further research still needs to be done in order to get a clear picture of the state of security and privacy in technology-enhanced learning, e.g. which security and privacy-enhancing technologies have already been integrated in the most used learning technologies; what are specific requirements for different learning environments and settings, etc. Further work is also needed in the area of standardisation, as current e-learning standards treat privacy and security issues only superficially.
 - Thematic workshops dealing with different requirements can be used for specific issues like TEL and adjustment to new jobs or the provision of staff with new duties. By joining such events industry and research might have the opportunity to build up new alliances for joint activities and to bridge the identified gaps in a more appropriate way. Moreover by bringing all target groups together one additional effect is to bringing supply and demand in one thematic framework together.
- The PROLEARN VCC transfer channels can be used by registered members and the PROLEARN consortium to provide news, documents, links etc. targeting the required areas described above. The PROLEARN VCC management can support this by modifying their structures in a way that such information can easily be identified by all target groups and by motivating additional partners from countries not involved in the VCC yet.
- Also the PROLEARN academy is playing an important role. Especially the transfer between industry to research and vice versa, e.g. on latest vocational and occupational re-training, could be an interesting experience (and challenge!) for the academy. So, together with the PROLEARN VCC management this information can be “translated” between the “world of economy” and the “world of science” and vice versa. The professional training facts event could be a good opportunity for extending these activities in an adequate way.

5.1 Outlook

Although the participants' estimation is not representative for all of Europe, the results can be used as a verification of the operationalised requirements in the trend study. So, further achievements and research activities should be invested. A possible approach would be to make a representative study on the requirements of professional training, qualification and learning issues in Europe on a diversified empirical basis.

Also branch-specific and country-specific studies could be a further step towards a better understanding of requirements for the benefit of companies, providers, intermediaries and research institutes.

Among the increase or maybe decrease of the obvious requirements in professional training and learning there should be an awareness of new requirements that could possibly be emerged. This means that future trend studies might give companies as well as research institutes the opportunity to describe qualitatively if new issues and gaps arise, viewed from their perspective.

6 Annex I: Questionnaire



Questionnaire Trend Study “development in TEL issues”

Institution: _____
Name: _____
Email: _____

Dear participant,

thank you for participating in this survey. It will take approximately 15 minutes to complete this questionnaire. We would like to determine your opinion on various aspects and trends of requirements in the area of professional training. The work is being undertaken as part of the PROLEARN project, a collaborative European project, designed to establish a network of excellence in the field of professional training supported by ICT.

[The results of this survey will help us to refine the requirements & developments in professional training.](#)

The survey consists of six sections. Each section is separated into two parts. Part one asks you about your opinion of the situation today and part two asks you about your estimation of the situation in three years.

In section one you are asked to tell us about how you rate statements on the market transparency. In section two you are asked to rate the importance of questions for future activities in e-learning. In section three, we ask you about your estimation of the demand of standardized and customized training products. In section four, you are asked to give an estimation of the specific demand of training content with different thematic orientation. In section five we ask you to rate the importance of potential user groups and in section six to do the same for specific professional learning tasks.

We will work with your data in an anonymous way only. It will not be possible to trace a single person from the globally aggregated data. This front paper side will be excluded from the analysis.

There are no right or wrong answers as we are only interested in your opinion.

Section 1: market transparency

In this section we ask you to tell us about how you rate statements to the transparency in the professional training market.

1.	Market transparency today	Very easy	easy	sometimes easy / sometimes difficult	difficult	very difficult	don't know
1.1	To receive information about the suppliers and their product or services is today:						
1.2	Today customers can compare products from the training market						

1.	Market transparency in three years	Very easy	easy	sometimes easy / sometimes difficult	difficult	very difficult	don't know
1.1	What do you estimate? To receive information about the suppliers and their product or services is in three years:						
1.2	What do you estimate? In three years customers can compare products from the training market:						

Section 2: Estimating future activities in e-learning

In this section you are asked to rate the importance of questions for future activities in e-learning.

2.	Estimating future activities in e-learning today	Very important	important	neither important / nor unimportant	unimportant	very unimportant	don't know
2.1	How important are information about forthcoming solutions latest trends and future developments in the training market today?						
2.2	How important is a cost-benefit analysis of companies to implement e-learning activities today?						

2.	Estimating future activities in e-learning in three years	Very important	important	neither important / nor unimportant	unimportant	very unimportant	don't know
2.1	What do you estimate? How important will be information about forthcoming solutions latest trends and future developments in the training market in three years?						
2.2	What do you estimate? How important will be a cost-benefit analysis of companies to implement e-learning activities in three years?						

Section 3: Standardisation vs. customization

In this section, we ask you about your estimation on the demand of standardized and customized training products today and in three years.

3.	Standardisation vs. customization today	Very low	low	medium	high	very high	don't know
3.1	The demand on standardised training products today is:						
3.2	The demand on customized training products today is:						
3.3	To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities today is:						

3.	Standardisation vs. customization in three years	Very low	low	medium	high	very high	don't know
3.1	What do you estimate? The demand on standardised training products in three years will be:						
3.2	What do you estimate? The demand on customized training products in three years will be:						
3.3	What do you estimate? To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities in three years will be:						

Section 4: Content-orientation

In this section, we ask you about your estimation on the specific demand of training content with different thematic orientation.

4.	Content-orientation today	Very low	low	medium	high	very high	don't know
4.1	The demand on support to advance in workplace position today is:						
4.2	The demand on vocational and occupational retraining today is:						
4.3	The demand for a adjustment to a new job today is:						
4.4	The demand to provide staff for new working tasks today is:						

4.	Content-orientation in three years	Very low	low	medium	high	very high	don't know
4.1	What do you estimate? The demand on support to advance in workplace position in three years will be:						
4.2	What do you estimate? The demand on vocational and occupational retraining in three years will be:						
4.3	What do you estimate? The demand for a adjustment to a new job in three years will be:						
4.4	What do you estimate? The demand to provide staff for new working tasks in three years will be:						

Section 5: Potential user groups

In this section we ask you to rate the importance of professional training for different, potential user groups.

5.	Potential user groups today	Very important	important	neither important / nor unimportant	unimportant	very unimportant	don't know
5.1	Today training opportunities for young staff is:						
5.2	Today the maintaining employability through continuing education and training by gaining qualifications at a later stage is:						
5.3	Today equal opportunities for women in training and employment are:						
5.4	Today equal opportunities for migrants in training and employment are:						
5.5	Today the use of the employment and qualification potential of older people is:						

5.	Potential user groups in three years	Very important	important	neither important / nor unimportant	unimportant	very unimportant	don't know
5.1	In three years training opportunities for young staff will be:						
5.2	In three years the maintaining employability through continuing education and training by gaining qualifications at a later stage will be:						
5.3	In three years equal opportunities for women in training and employment will be:						
5.4	In three years equal opportunities for migrants in training and employment will be:						
5.5	In three years the use of the employment and qualification potential of older people will be:						

Section 6: Specific professional learning tasks

In this section we ask you to rate the importance of specific professional learning tasks.

6.	Specific professional learning tasks today	Very important	important	neither important / nor unimportant	unimportant	very unimportant	don't know
6.1	Today the management of staff in the area of professional training is:						
6.2	Today topics of Marketing & Distribution in the area of professional training are:						
6.3	Today Communication tasks in the area of professional training are:						
6.4	Today Quality management in the area of professional training is:						
6.5	Today Product management in the area of professional training is:						
6.6	Today Cost management in the area of professional training is:						
6.7	Today Human resource Management in the area of professional training is:						
6.8	Today Environment protection questions are:						
6.9	Today Train the trainer tasks are:						
6.10	Today Languages and intercultural training is:						
6.11	Today Computer application training is:						
6.12	Today Corporate culture in the area of professional training is:						
6.13	Today Office organisation training is:						
6.14	Today training in the thematic area of Law is:						

6.	Specific professional learning tasks in three years	Very important	important	neither important / nor unimportant	unimportant	very unimportant	don't know
6.1	In three years the management of staff in the area of professional training will be:						
6.2	In three years topics of Marketing & Distribution in the area of professional training will be:						
6.3	In three years Communication tasks in the area of professional training will be:						
6.4	In three years Quality management in the area of professional training will be:						
6.5	In three years Product management in the area of professional training will be:						
6.6	In three years Cost management in the area of professional training will be:						
6.7	In three Human resource Management in the area of professional training will be:						
6.8	In three years Environment protection questions will be:						
6.9	In three years Train the trainer tasks will be:						
6.10	In three years Languages and intercultural training will be:						
6.11	In three years Computer application training will be:						
6.12	In three years Corporate culture in the area of professional training will be:						
6.13	In three years Office organisation training will be:						
6.14	In three years training in the thematic area of Law will be:						

7 Annex II: Tables, Figures and Survey data analyzed

A. Tables

1. ALL PARTICIPANTS TODAY AND IN THREE YEARS

1.1. market transparency

Tab 1.1.11:	To receive information about the suppliers and their product or services today
Tab 1.1.12:	To receive information about the suppliers and their product or services in three years
Tab 1.1.21	Customers can compare products from the training market today
Tab 1.1.22	Customers can compare products from the training market in three years

1.2. Estimating future activities in e-learning

Tab 1.2.11	How important are information about forthcoming solutions latest trends and future developments in the training market today
Tab 1.2.12	How important are information about forthcoming solutions latest trends and future developments in the training market in three years
Tab 1.2.21	How important is a cost-benefit analysis of companies to implement e-learning activities today
Tab 1.2.22	How important is a cost-benefit analysis of companies to implement e-learning activities in three years

1.3. Standardisation vs. customization

Tab 1.3.11	The demand on standardised training products today is
Tab 1.3.12	The demand on standardised training products in three years will be
Tab 1.3.21	The demand on customized training products today is
Tab 1.3.22	The demand on customized training products in three years will be
Tab 1.3.31	To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities today is
Tab 1.3.32	To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities in three years will be

1.4. Content-orientation

Tab 1.4.11	The demand on support to advance in workplace position today is
Tab 1.4.12	The demand on support to advance in workplace position in three years will be
Tab 1.4.21	The demand on vocational and occupational retraining today is
Tab 1.4.22	The demand on vocational and occupational retraining in three years will be
Tab 1.4.31	The demand for a adjustment to a new job today is
Tab 1.4.32	The demand for a adjustment to a new job in three years will be
Tab 1.4.41	The demand to provide staff for new working tasks today is
Tab 1.4.42	The demand to provide staff for new working tasks in three years will be

1.5. Potential user groups

Tab 1.5.11	Training opportunities for young staff today is
Tab 1.5.12	Training opportunities for young staff in three years will be

Tab 1.5.21	The Maintaining employability through continuing education and training by gaining qualifications at a later stage today is
Tab 1.5.22	The Maintaining employability through continuing education and training by gaining qualifications at a later stage in three years will be
Tab 1.5.31	Today equal opportunities for women in training and employment are
Tab 1.5.32	In three years equal opportunities for women in training and employment will be
Tab 1.5.41	Today equal opportunities for migrants in training and employment are
Tab 1.5.42	In three years equal opportunities for migrants in training and employment will be
Tab 1.5.51	Today the use of the employment and qualification potential of older people is
Tab 1.5.52	In three years the use of the employment and qualification potential of older people will be

1.6. Specific professional learning tasks

Tab 1.6.11	Today the management of staff in the area of professional training is
Tab 1.6.12	In three years the management of staff in the area of professional training will be
Tab 1.6.21	Today topics of Marketing & Distribution in the area of professional training are
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Tab 1.6.32	In three years communication tasks in the area of professional training will be
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Tab 1.6.42	In three years quality management in the area of professional training will be
Tab 1.6.51	Today product management in the area of professional training is
Tab 1.6.52	In three years product management in the area of professional training will be
Tab 1.6.61	Today cost management in the area of professional training is
Tab 1.6.62	In three years cost management in the area of professional training will be
Tab 1.6.71	Today human resource Management in the area of professional training is
Tab 1.6.72	In three years human resource Management in the area of professional training will be
Tab 1.6.81	Today environment protection questions are
Tab 1.6.82	In three years environment protection questions will be
Tab 1.6.91	Today train the trainer tasks are
Tab 1.6.92	In three years train the trainer tasks will be
Tab 1.6.101	Today languages and intercultural training is
Tab 1.6.102	In three years languages and intercultural training will be
Tab 1.6.111	Today computer application training is
Tab 1.6.112	In three years computer application training will be
Tab 1.6.121	Today corporate culture in the area of professional training is
Tab 1.6.122	In three years corporate culture in the area of professional training will be
Tab 1.6.131	Today office organisation training is
Tab 1.6.132	In three years office organisation training will be
Tab 1.6.141	Today training in the thematic area of Law is
Tab 1.6.142	In three years training in the thematic area of Law will be

2. COMPANIES TODAY AND IN THREE YEARS

2.1. market transparency

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2.3. Standardisation vs. customization

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B. Overview Figures

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Fig 1.1.2: Customers can compare products from the training market

1.2. Estimating future activities in e-learning

Fig 1.2.1: How important are information about forthcoming solutions latest trends and future developments in the training market

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Fig 1.6.3 Communication tasks in the area of professional training are

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Fig 1.6.5 Product management in the area of professional training is

Fig 1.6.6 Cost management in the area of professional training is

Fig 1.6.7 Human resource Management in the area of professional training is

Fig 1.6.8 Environment protection questions are

Fig 1.6.9 Train the trainer tasks are

Fig 1.6.10 Languages and intercultural training is

Fig 1.6.11 Computer application training is

Fig 1.6.12 Corporate culture in the area of professional training is

Fig 1.6.13 Office organisation training is

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- Fig 3.6.13 Office organisation training is
- Fig 3.6.14 Training in the thematic area of Law is

C. Survey data analyzed

ALL PARTICIPANTS TODAY AND IN THREE YEARS

Section 1: market transparency

		Percentage
N=149	easy	32,4
	sometimes easy / sometimes difficult	42,8
	difficult	24,8
	Total	100,0

Tab 1.1.11: To receive information about the suppliers and their product or services is today

		Percentage
N=149	easy	61,3
	sometimes easy / sometimes difficult	26,8
	difficult	12,0
	Total	100,0

Tab 1.1.12: To receive information about the suppliers and their product or services is in three years

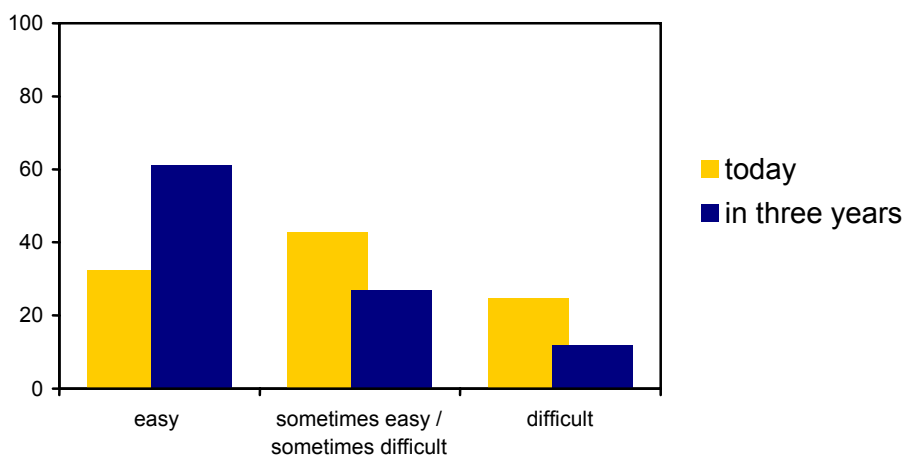


Fig 1.1.1: To receive information about the suppliers and their product or services is in three years

		Percentage
N=149	easy	13,0
	sometimes easy / sometimes difficult	33,6
	difficult	53,4
	Total	100,0

Tab 1.1.21: Customers can compare products training from the training market

		Percentage
N=149	easy	40,4
	sometimes easy / sometimes difficult	29,8
	difficult	29,8
	Total	100,0

Tab 1.1.21: Customers can compare products training from the training market in three years

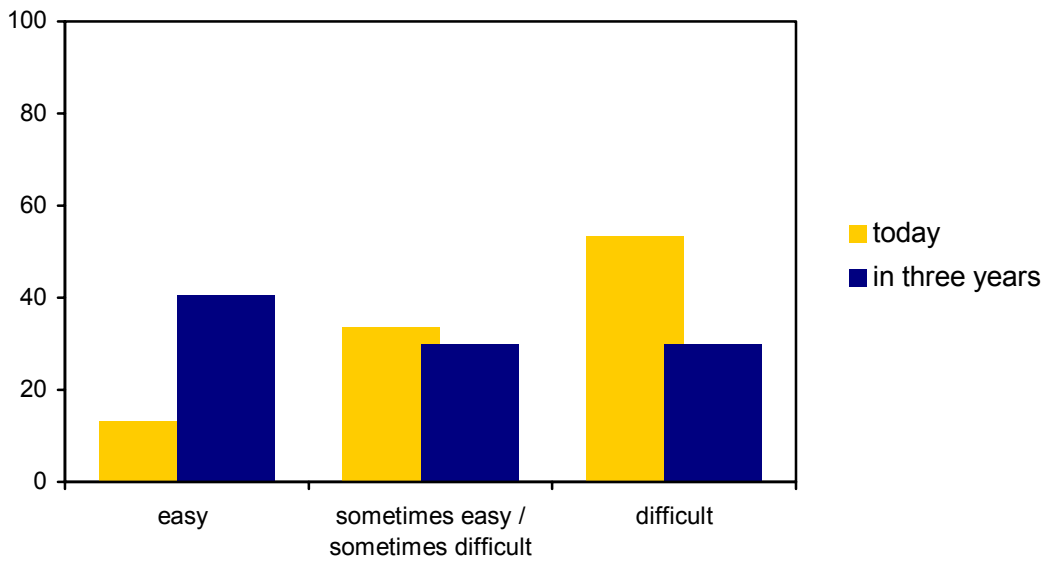


Fig. 1.1.2: Customers can compare products from the training market

Section 2: Estimating future activities in e-learning

		Percentage
N=149	important	86,6
	neither important / nor unimportant	8,7
	unimportant	4,7
	Total	100,0

Tab 1.2.11: How important are information about forthcoming solutions latest trends and future developments in the training market today

		Percentage
N=N=149	important	89,2
	neither important / nor unimportant	8,8
	unimportant	2,0
	Total	100,0

Tab 1.2.12: How important will be information about forthcoming solutions latest trends and future developments in the training market in three years

How important are information about forthcoming solutions latest trends and future developments in the training market?

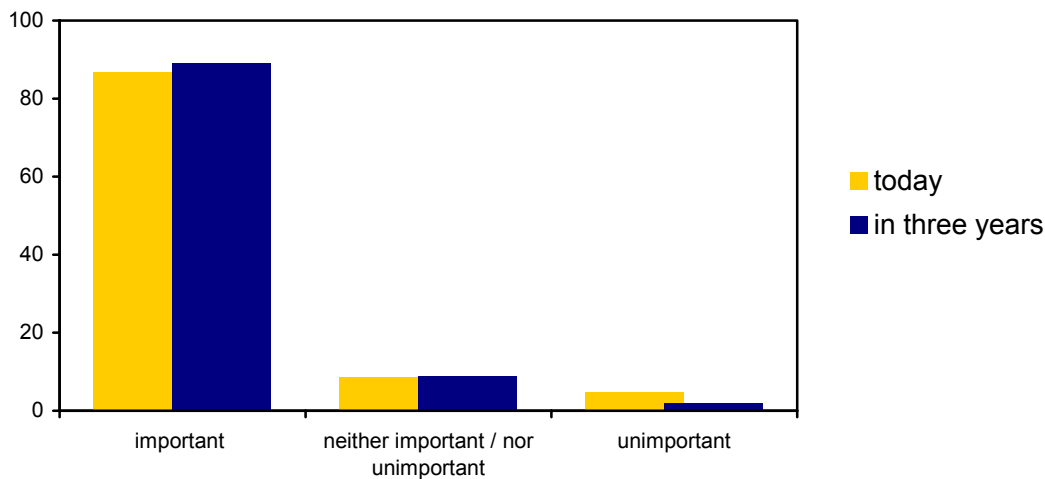


Fig. 1.2.1: How important will be information about forthcoming solutions latest trends and future developments in the training market in three years and today

		Percentage
N=149	important	88,5
	neither important / nor unimportant	8,1
	unimportant	3,4
	Total	100,0

Tab 1.2.21: How important is a cost-benefit analysis of companies to implement e-learning activities today

		Percentage
N=148	important	91,2
	neither important / nor unimportant	6,8
	unimportant	2,0
	Total	100,0

Tab 1.2.22: How important is a cost-benefit analysis of companies to implement e-learning activities in three years

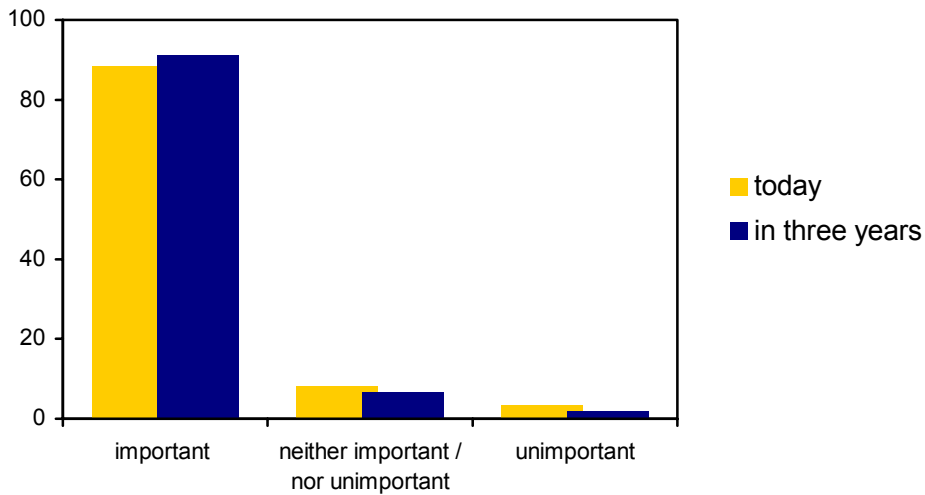


Fig 1.2.2: How important is a cost-benefit analysis of companies to implement e-learning activities

Section 3: Standardisation vs. customization

		Percentage
N=149	high	31,7
	medium	42,3
	low	26,1
	Total	100,0

Tab 1.3.11: The demand on standardised training products today is

		Percentage
N=149	high	59,2
	medium	28,6
	low	12,2
	Total	100,0

Tab 1.3.12: The demand on standardised training products in three years will be

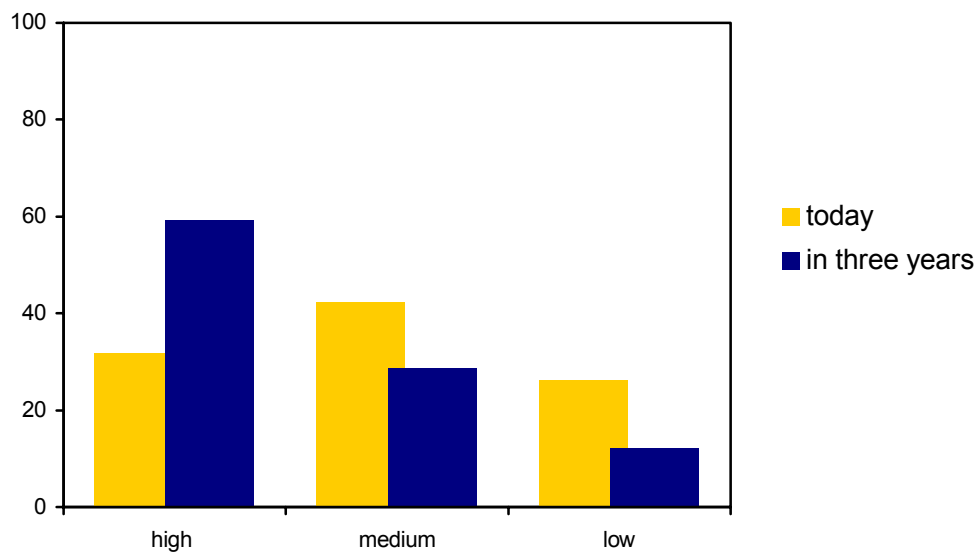


Fig 1.3.1: The demand on standardised training products is

		Percentage
N=149	high	62,5
	medium	25,7
	low	11,8
	Total	100,0

Tab 1.3.21: The demand on customized training products today is

		Percentage
N=149	high	83,4
	medium	14,5
	low	2,1
	Total	100,0

Tab 1.3.22: The demand on customized training products in three years will be

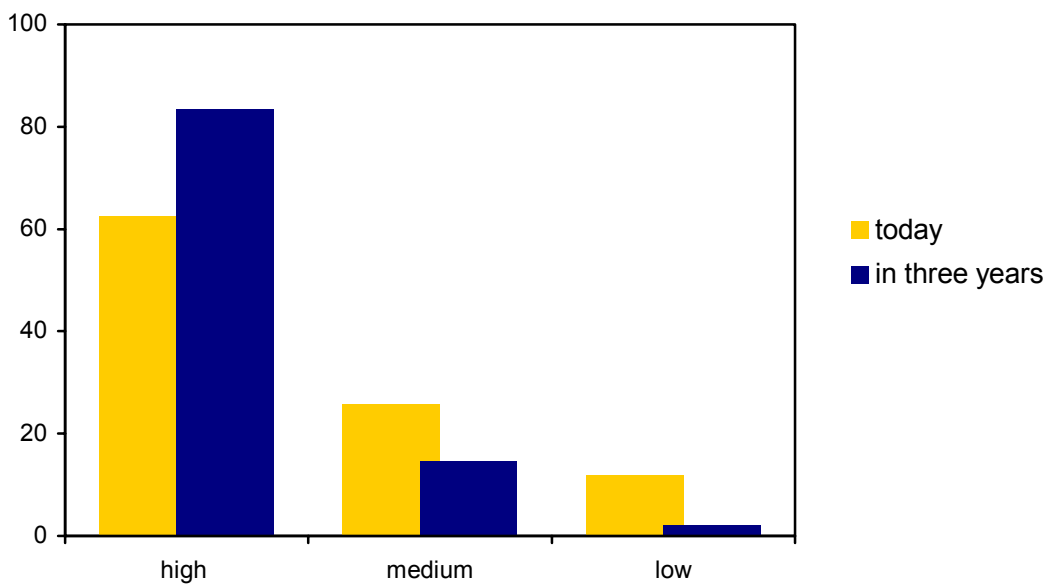


Fig 1.3.2: The demand on customized training products is

		Percentage
N=149	high	33,3
	medium	26,4
	low	40,3
	Total	100,0

Tab 1.3.31: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities today is

		Percentage
N=149	high	69,6
	medium	24,4
	low	5,9
	Total	100,0

Tab 1.3.32: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities in three years will be

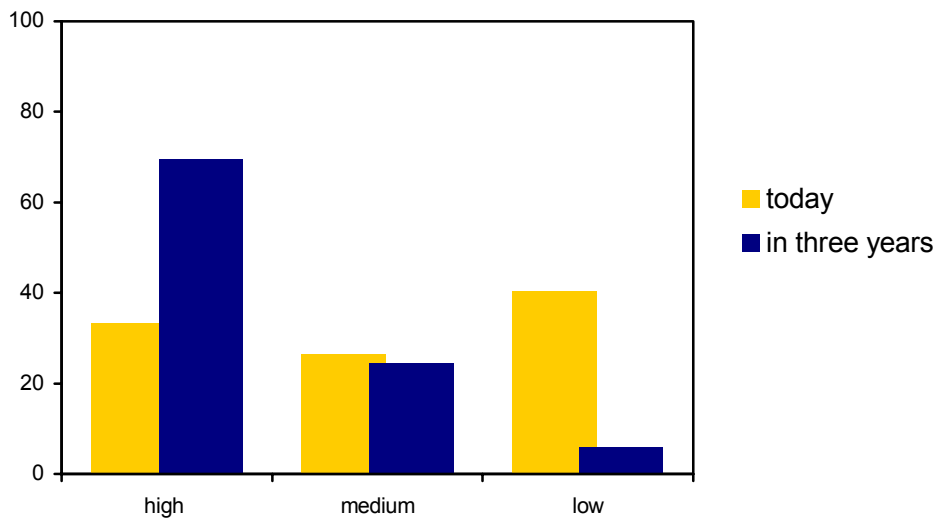


Fig 1.3.3: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities is

Section 4: Content-orientation

		Percentage
N=149	high	40,3
	medium	40,3
	low	19,4
	Total	100,0

Tab 1.4.11: The demand on support to advance in workplace position today is

		Percentage
N=149	high	78,7
	medium	17,0
	low	4,3
	Total	100,0

Tab 1.4.12: The demand on support to advance in workplace position in three years will be

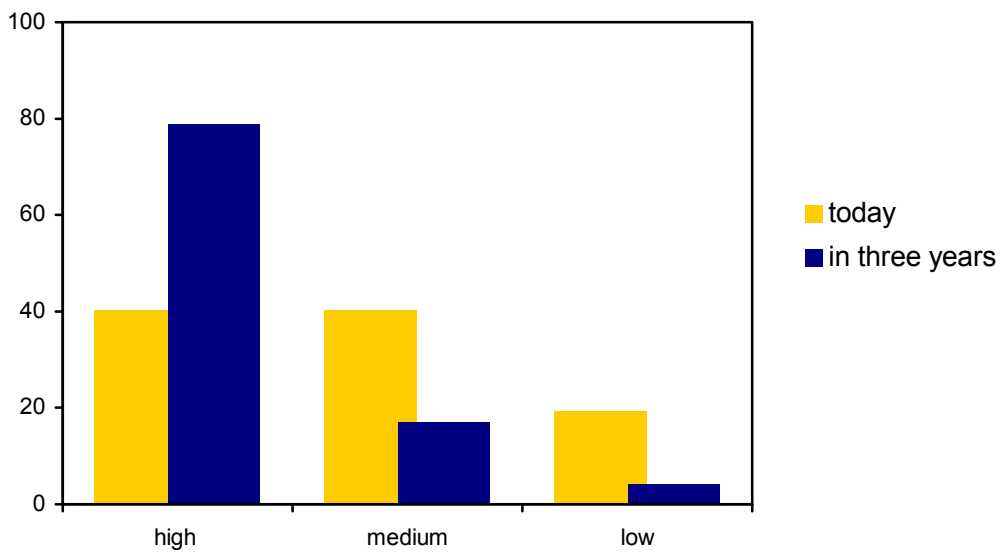


Fig 1.4.1: The demand on support to advance in workplace position is

		Percentage
N=149	high	52,5
	medium	36,2
	low	11,3
	Total	100,0

Tab 1.4.21: The demand on vocational and occupational retraining today is

		Percentage
N=149	high	79,2
	medium	15,3
	low	5,6
	Total	100,0

Tab 1.4.22: The demand on vocational and occupational retraining in three years will be

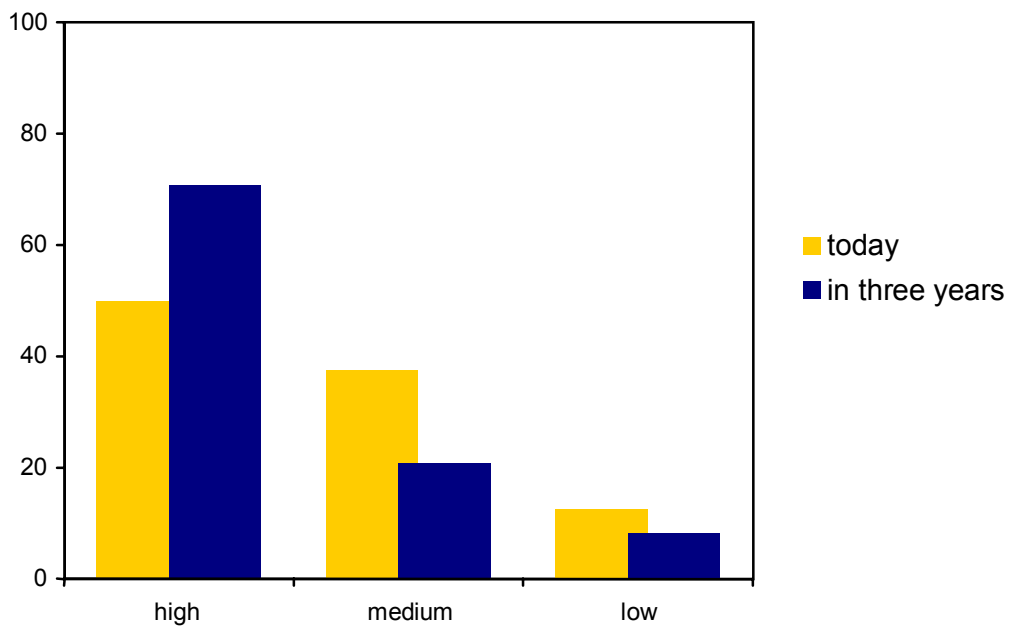


Fig 1.4.2: The demand on vocational and occupational retraining is

		Percentage
N=149	high	59,3
	medium	28,3
	low	12,4
	Total	100,0

Tab 1.4.31: The demand for a adjustment to a new job today is

		Percentage
N=149	high	84,8
	medium	13,1
	low	2,1
	Total	100,0

Tab 1.4.32: The demand for a adjustment to a new job in three years will be

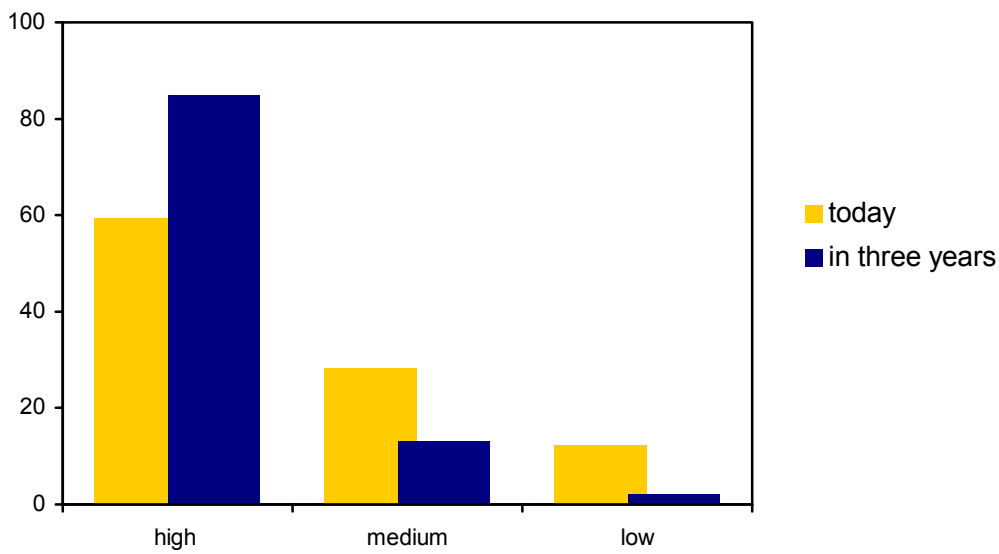


Fig 1.4.3: The demand for a adjustment to a new job is

		Percentage
N=149	high	52,1
	medium	34,0
	low	13,9
	Total	100,0

Tab 1.4.41: The demand to provide staff for new working tasks today is

		Percentage
149	high	78,3
	medium	16,8
	low	4,9
	Total	100,0

Tab 1.4.42: The demand to provide staff for new working tasks in three years will be

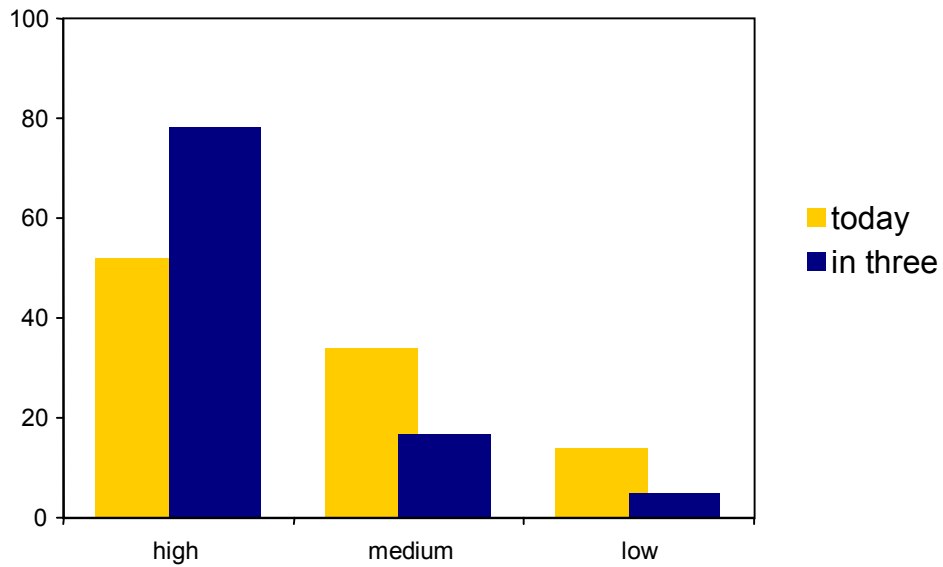


Fig 1.4.4: The demand to provide staff for new working tasks is

Section 5: Potential user groups

		Percentage
N=149	important	75,5
	neither important / nor unimportant	17,7
	unimportant	6,8
	Total	100,0

Tab 1.5.11: Training opportunities for young staff today is

		Percentage
149	important	90,5
	neither important / nor unimportant	6,1
	unimportant	3,4
	Total	100,0

Tab 1.5.12: Training opportunities for young staff in three years will be

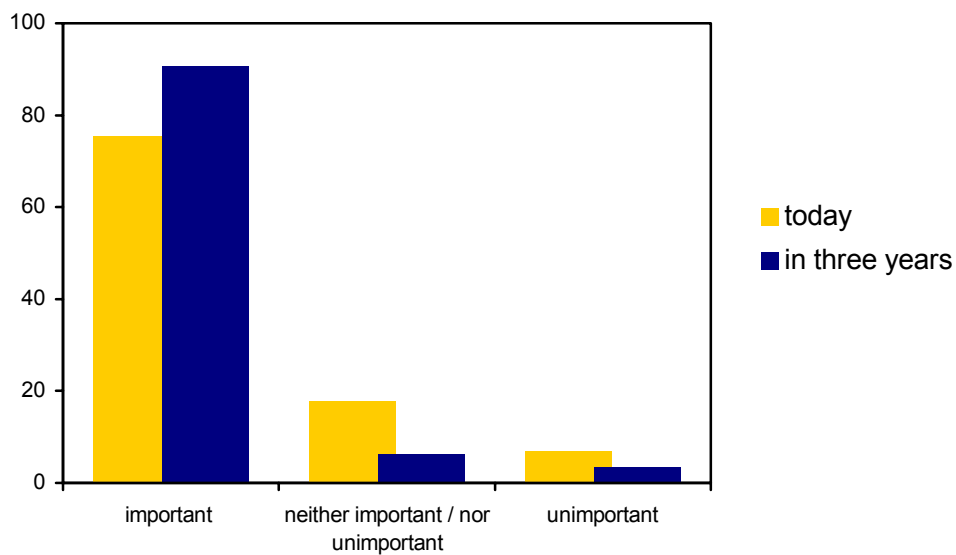


Fig 1.5.1: Training opportunities for young staff is

		Percentage
N=149	important	71,4
	neither important / nor unimportant	19,0
	unimportant	9,5
	Total	100,0

Tab 1.5.21: The Maintaining employability through continuing education and training by gaining qualifications at a later stage today is

		Percentage
N=149	important	89,1
	neither important / nor unimportant	7,5
	unimportant	3,4
	Total	100,0

Tab 1.5.22: The Maintaining employability through continuing education and training by gaining qualifications at a later stage in three years will be

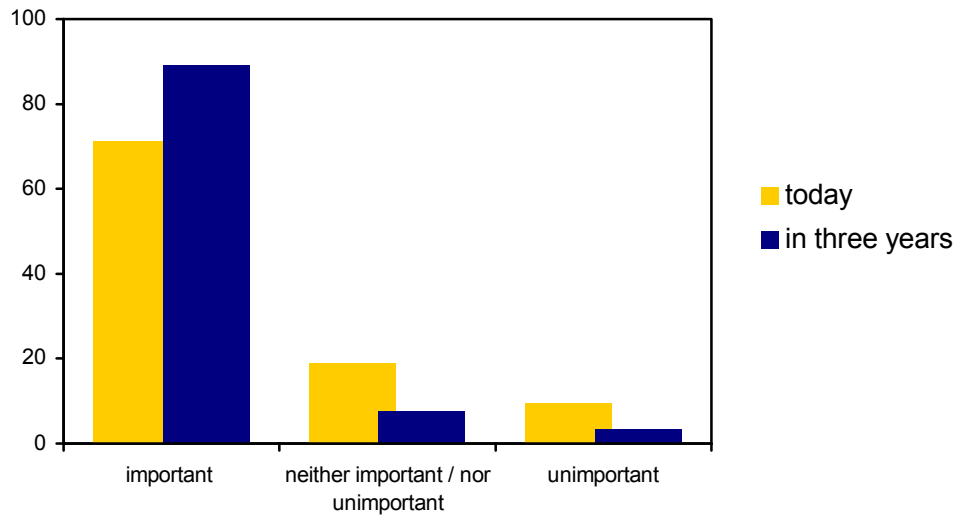


Fig 1.5.2: The Maintaining employability through continuing education and training by gaining qualifications at a later stage is

		Percentage
N=149	important	57,9
	neither important / nor unimportant	32,4
	unimportant	9,7
	Total	100,0

Tab 1.5.31: Today equal opportunities for women in training and employment are

		Percentage
N=149	important	75,7
	neither important / nor unimportant	21,5
	unimportant	2,8
	Total	100,0

Tab 1.5.32: In three years equal opportunities for women in training and employment will be

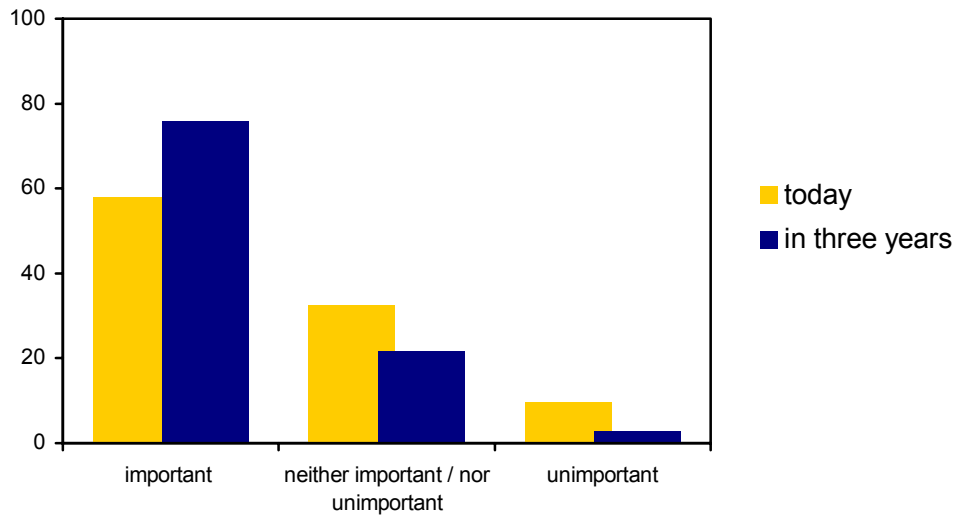


Fig 1.5.3: Equal opportunities for women in training and employment are

		Percentage
N=149	important	55,2
	neither important / nor unimportant	29,4
	unimportant	15,4
	Total	100,0

Tab 1.5.41: Today equal opportunities for migrants in training and employment are

		Percentage
N=149	important	72,9
	neither important / nor unimportant	21,5
	unimportant	5,6
	Total	100,0

Tab 1.5.42: In three years equal opportunities for migrants in training and employment will be

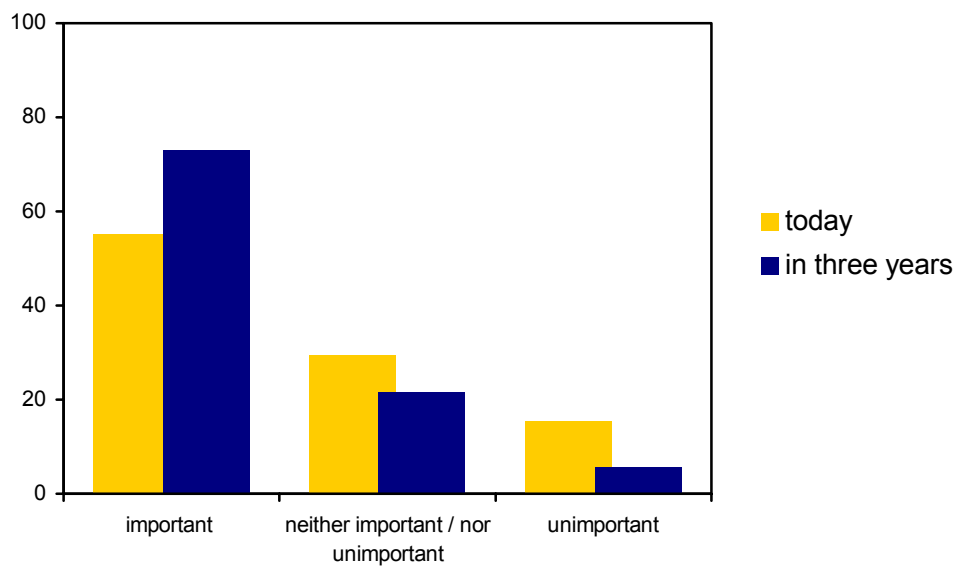


Fig 1.5.4: Equal opportunities for migrants in training and employment are

		Percentage
N=149	important	33,8
	neither important / nor unimportant	37,8
	unimportant	28,4
	Total	100,0

Tab 1.5.51: Today the use of the employment and qualification potential of older people is

		Percentage
N=149	important	68,7
	neither important / nor unimportant	21,8
	unimportant	9,5
	Total	100,0

Tab 1.5.52: In three years the use of the employment and qualification potential of older people will be

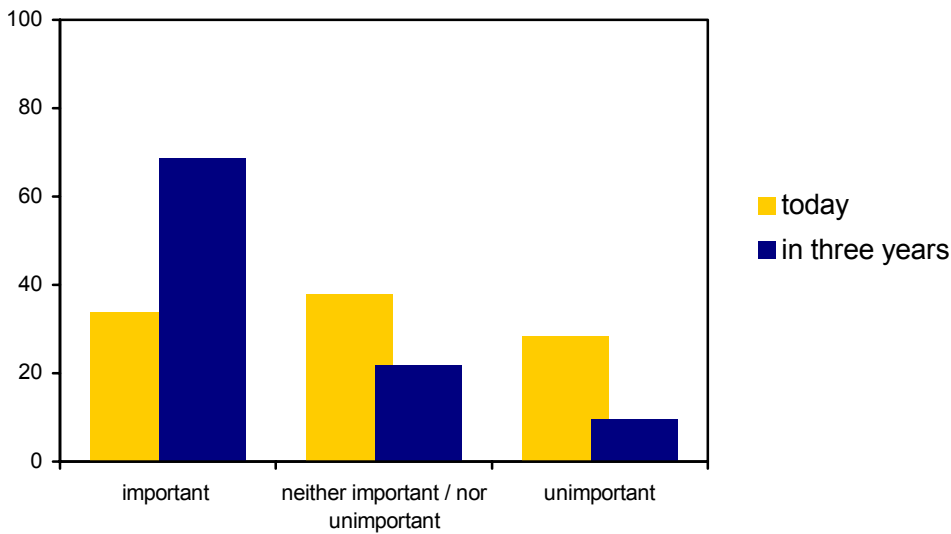


Fig 1.5.5: The use of the employment and qualification potential of older people is

Section 6: Specific professional learning tasks

		Percentage
N=149	important	66,2
	neither important / nor unimportant	22,5
	unimportant	11,3
	Total	100,0

Tab 1.6.11: Today the management of staff in the area of professional training is

		Percentage
149	important	85,0
	neither important / nor unimportant	12,1
	unimportant	2,9
	Total	100,0

Tab 1.6.12: In three years the management of staff in the area of professional training will be

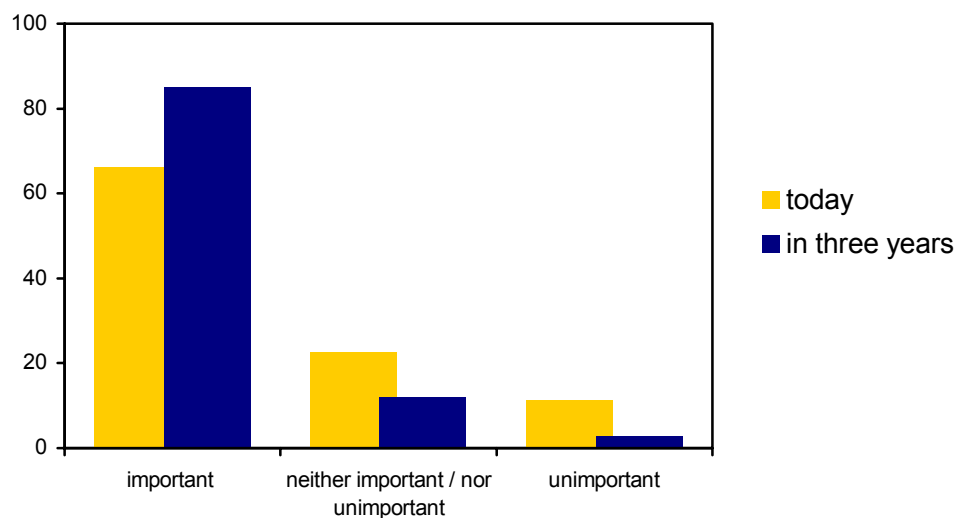


Fig 1.6.1: The management of staff in the area of professional training is

		Percentage
N=149	important	62,2
	neither important / nor unimportant	27,4
	unimportant	10,4
	Total	100,0

Tab 1.6.21: Today topics of Marketing & Distribution in the area of professional training are

		Percentage
149	important	83,7
	neither important / nor unimportant	12,6
	unimportant	3,7
	Total	100,0

Tab 1.6.22: In three years topics of Marketing & Distribution in the area of professional training will be

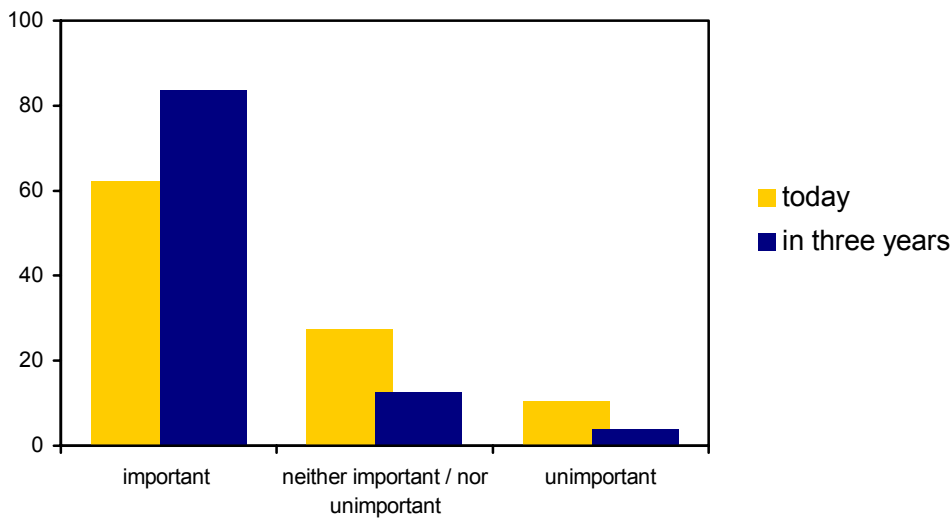


Fig 1.6.2: Topics of Marketing & Distribution in the area of professional training are

		Percentage
N=149	important	72,1
	neither important / nor unimportant	20,0
	unimportant	7,9
	Total	100,0

Tab 1.6.31: Today communication tasks in the area of professional training are

		Percentage
149	important	89,9
	neither important / nor unimportant	8,0
	unimportant	2,2
	Total	100,0

Tab 1.6.32: In three years communication tasks in the area of professional training will be

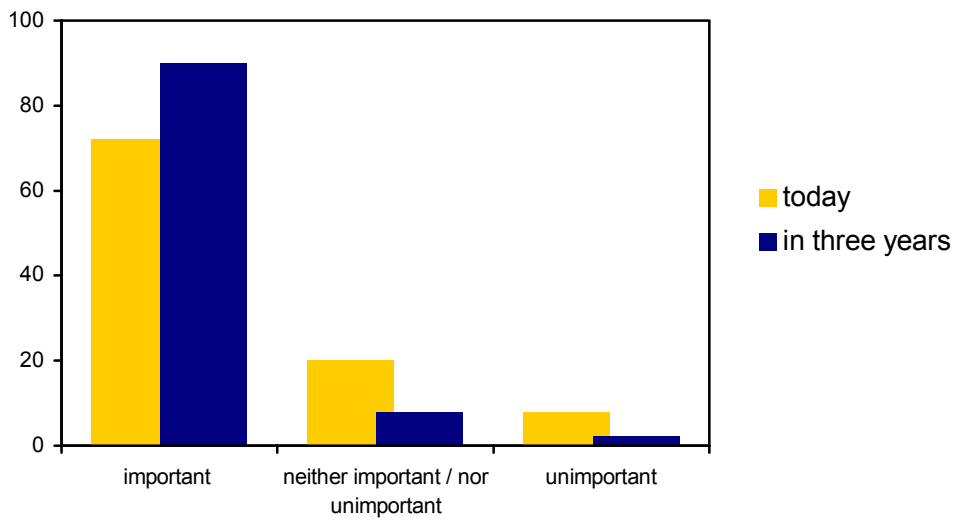


Fig 1.6.3: Communication tasks in the area of professional training are

		Percentage
N=149	important	66,9
	neither important / nor unimportant	22,3
	unimportant	10,8
	Total	100,0

Tab 1.6.41: Today quality management in the area of professional training is

		Percentage
149	important	90,4
	neither important / nor unimportant	7,4
	unimportant	2,2
	Total	100,0

Tab 1.6.42: In three years quality management in the area of professional training will be

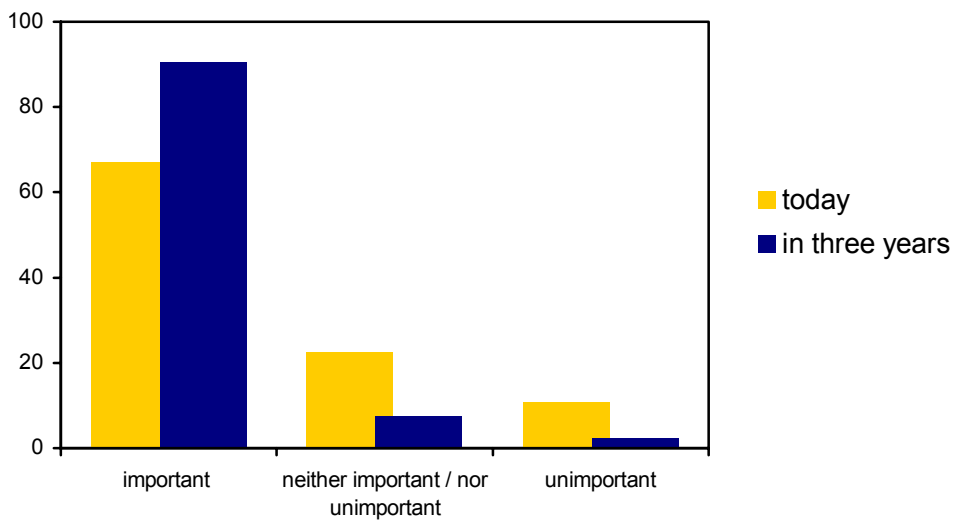


Fig 1.6.4: Quality management in the area of professional training is

		Percentage
N=149	important	56,4
	neither important / nor unimportant	30,7
	unimportant	12,9
	Total	100,0

Tab 1.6.51: Today product management in the area of professional training is

		Percentage
149	important	78,7
	neither important / nor unimportant	18,4
	unimportant	2,9
	Total	100,0

Tab 1.6.52: In three years product management in the area of professional training will be

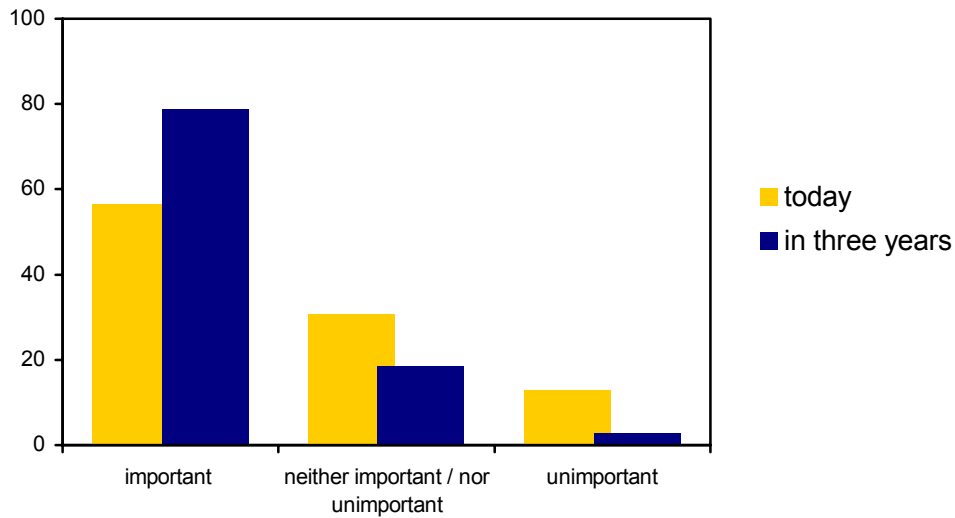


Fig 1.6.5: Product management in the area of professional training is

		Percentage
N=149	important	67,9
	neither important / nor unimportant	23,6
	unimportant	8,6
	Total	100,0

Tab 1.6.61: Today cost management in the area of professional training is

		Percentage
149	important	83,9
	neither important / nor unimportant	13,1
	unimportant	2,9
	Total	100,0

Tab 1.6.62: In three years cost management in the area of professional training will be

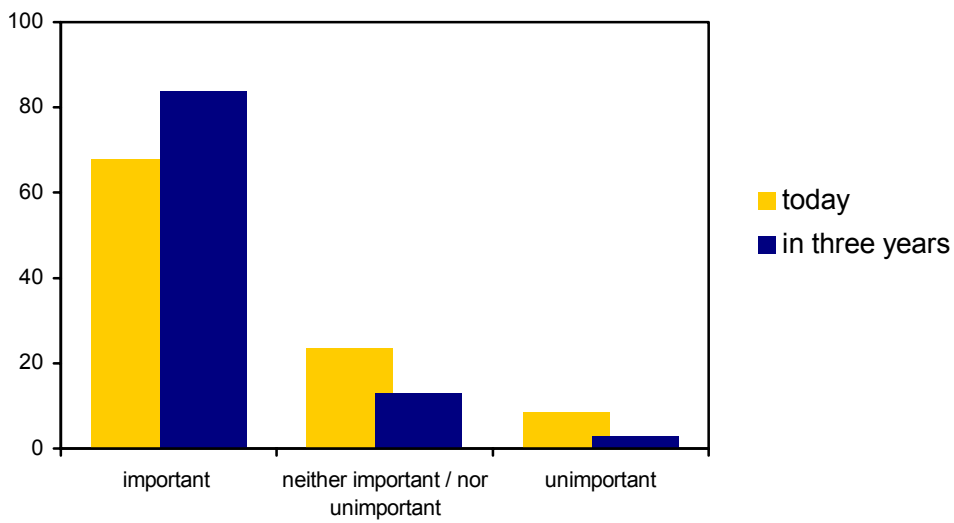


Fig 1.6.6: Cost management in the area of professional training is

		Percentage
N=149	important	65,7
	neither important / nor unimportant	26,3
	unimportant	8,0
	Total	100,0

Tab 1.6.71: Today human resource Management in the area of professional training is

		Percentage
149	important	82,2
	neither important / nor unimportant	14,8
	unimportant	3,0
	Total	100,0

Tab 1.6.72: In three years human resource Management in the area of professional training will be

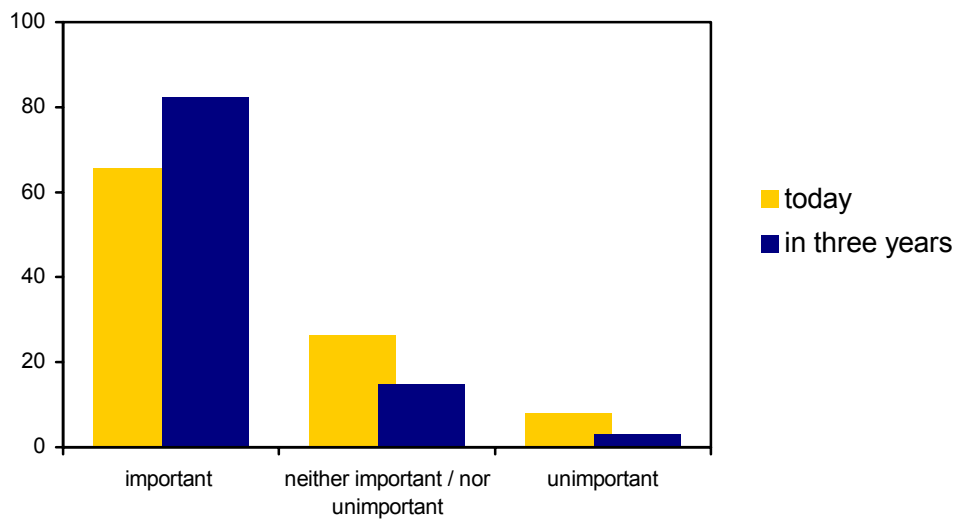


Fig 1.6.7: Human resource Management in the area of professional training is

		Percentage
N=149	important	49,6
	neither important / nor unimportant	32,8
	unimportant	17,5
	Total	100,0

Tab 1.6.81: Today environment protection questions are

		Percentage
149	important	71,5
	neither important / nor unimportant	20,4
	unimportant	8,0
	Total	100,0

Tab 1.6.82: In three years environment protection questions will be

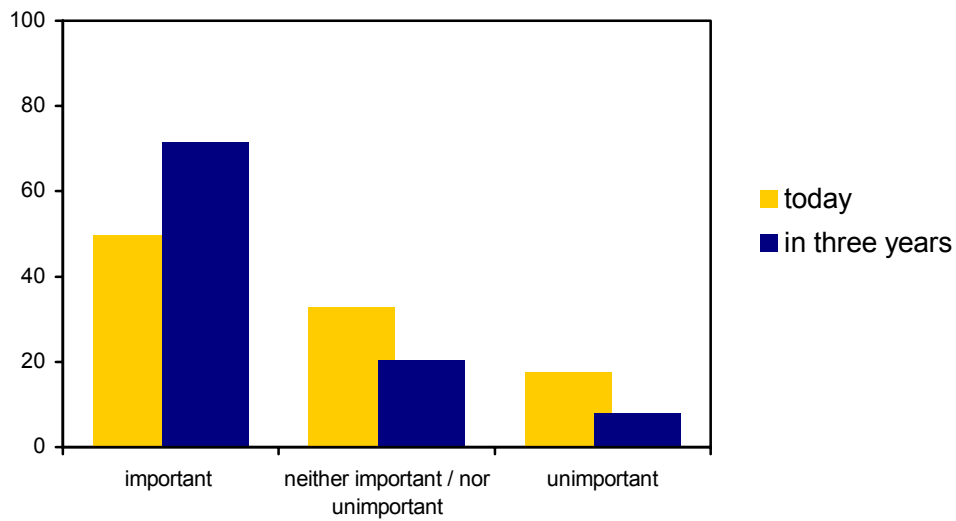


Fig 1.6.8: Environment protection questions are

		Percentage
N=149	important	58,6
	neither important / nor unimportant	30,7
	unimportant	10,7
	Total	100,0

Tab 1.6.91: Today train the trainer tasks are

		Percentage
149	important	79,9
	neither important / nor unimportant	13,7
	unimportant	6,5
	Total	100,0

Tab 1.6.92: In three years train the trainer tasks will be

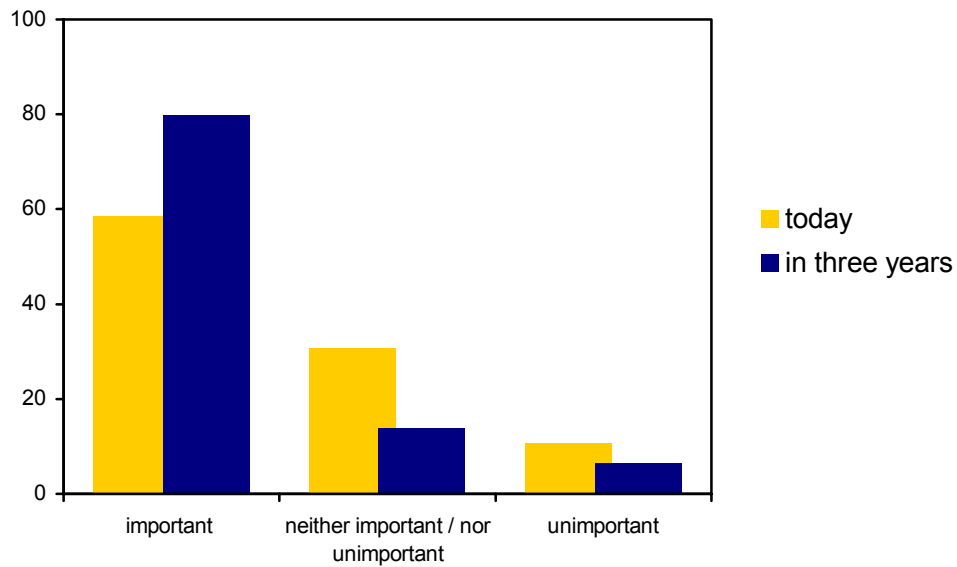


Fig 1.6.9: Train the trainer tasks are

		Percentage
N=149	important	65,7
	neither important / nor unimportant	23,1
	unimportant	11,2
	Total	100,0

Tab 1.6.101: Today languages and intercultural training is

		Percentage
149	important	82,3
	neither important / nor unimportant	12,1
	unimportant	5,7
	Total	100,0

Tab 1.6.102: In three years languages and intercultural training will be

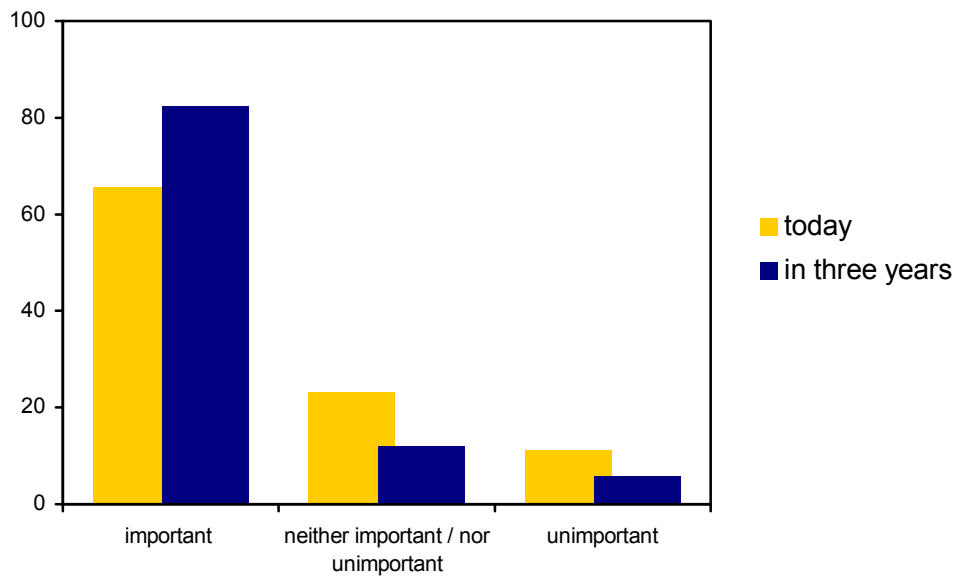


Fig 1.6.10: Languages and intercultural training is

		Percentage
N=149	important	79,2
	neither important / nor unimportant	15,3
	unimportant	5,6
	Total	100,0

Tab 1.6.111: Today computer application training is

		Percentage
149	important	73,9
	neither important / nor unimportant	19,7
	unimportant	6,3
	Total	100,0

Tab 1.6.112: In three years computer application training will be

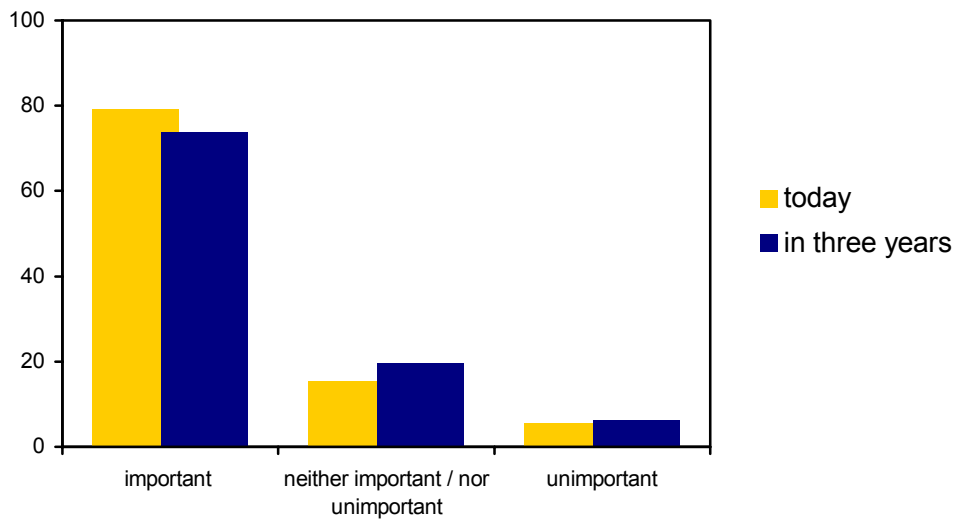


Fig 1.6.11: Computer application training is

		Percentage
N=149	important	45,3
	neither important / nor unimportant	41,0
	unimportant	13,7
	Total	100,0

Tab 1.6.121: Today corporate culture in the area of professional training is

		Percentage
149	important	69,3
	neither important / nor unimportant	21,9
	unimportant	8,8
	Total	100,0

Tab 1.6.122: In three years corporate culture in the area of professional training will be

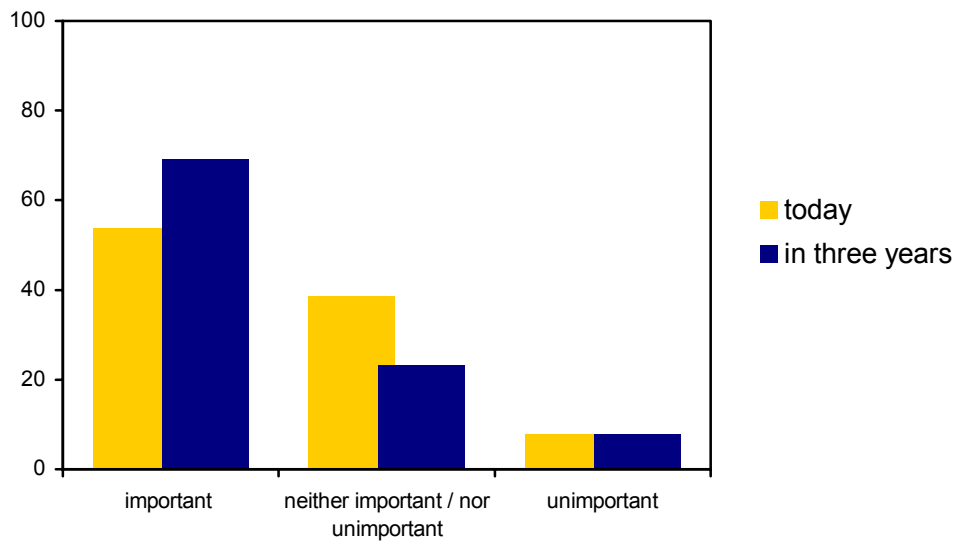


Fig 1.6.12: Corporate culture in the area of professional training is

		Percentage
N=149	important	43,2
	neither important / nor unimportant	39,6
	unimportant	17,3
	Total	100,0

Tab 1.6.131: Today office organisation training is

		Percentage
N=149	important	51,1
	neither important / nor unimportant	40,1
	unimportant	8,8
	Total	100,0

Tab 1.6.132: In three years office organisation training will be

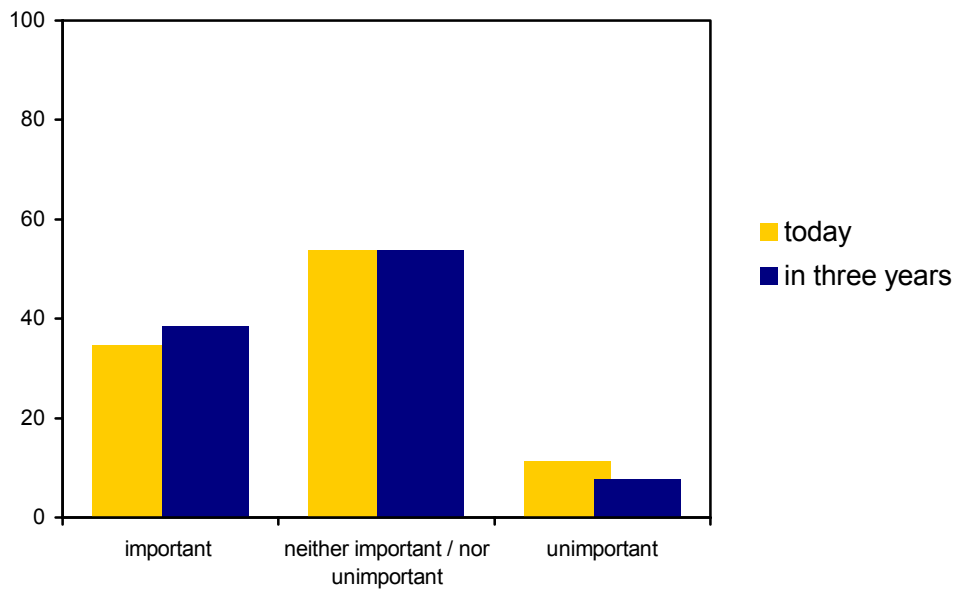


Fig 1.6.13: Office organisation training is

		Percentage
N=149	important	36,9
	neither important / nor unimportant	40,0
	unimportant	23,1
	Total	100,0

Tab 1.6.141: Today training in the thematic area of Law is

		Percentage
149	important	52,7
	neither important / nor unimportant	36,6
	unimportant	10,7
	Total	100,0

Tab 1.6.142: In three years training in the thematic area of Law will be

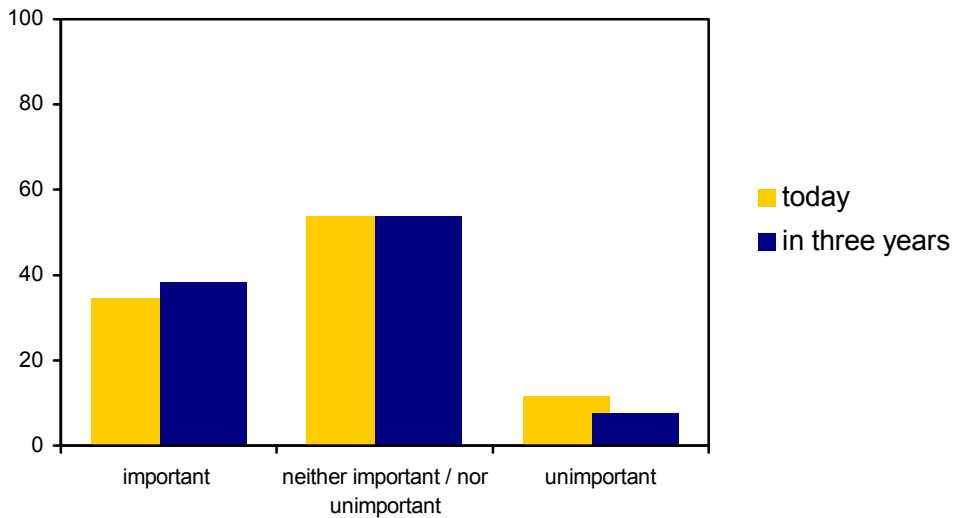


Fig 1.6.14: Training in the thematic area of Law is

COMPANIES TODAY AND IN THREE YEARS

Section 1: market transparency

		Percentage
N=27	easy	37,0
	sometimes easy / sometimes difficult	40,7
	difficult	22,2
	Total	100,0

Tab 2.1.11: To receive information about the suppliers and their product or services today

		Percentage
N=27	easy	69,2
	sometimes easy / sometimes difficult	23,1
	difficult	7,7
	Total	100,0

Tab 2.1.12: To receive information about the suppliers and their product or services in three years

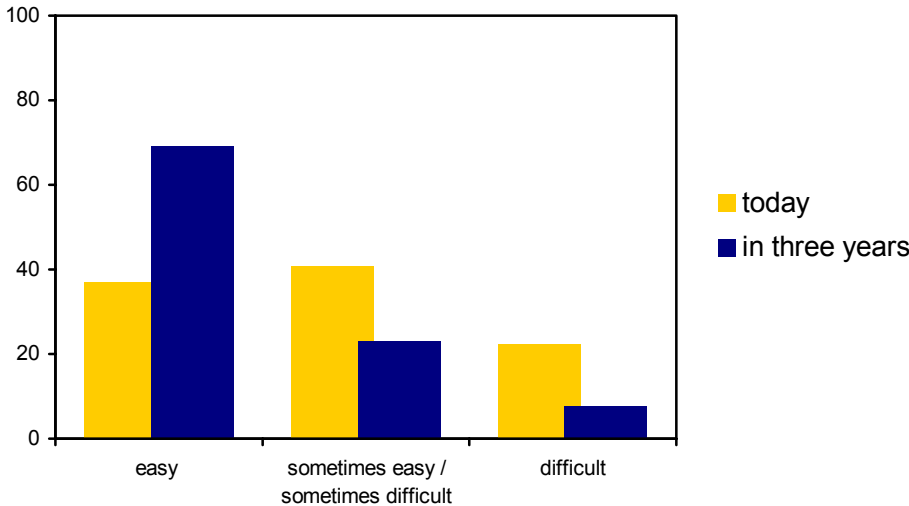


Fig 2.1.1: To receive information about the suppliers and their product or services

		Percentage
N=27	easy	3,7
	sometimes easy / sometimes difficult	40,7
	difficult	55,6
	Total	100,0

Tab 2.1.21: Customers can compare products from the training market

		Percentage
N=27	easy	50,0
	sometimes easy / sometimes difficult	23,1
	difficult	26,9
	Total	100,0

Tab 2.1.22: Customers can compare products from the training market in three years

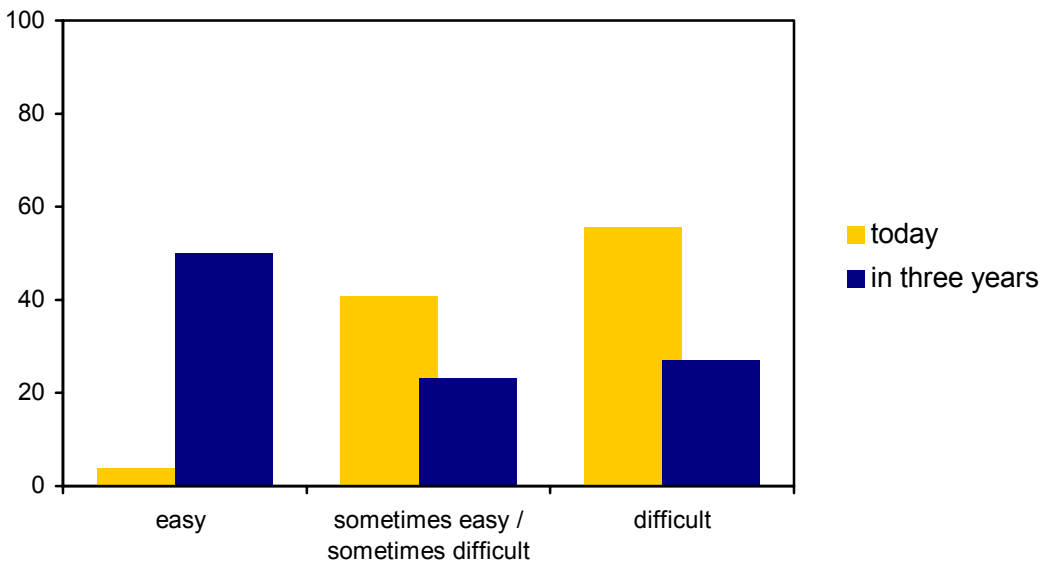


Fig 2.1.2: Customers can compare products from the training market

Section 2: Estimating future activities in e-learning

		Percentage
N=27	important	81,5
	neither important / nor unimportant	7,4
	unimportant	11,1
	Total	100,0

Tab 2.2.11: How important are information about forthcoming solutions latest trends and future developments in the training market today

		Percentage
N=27	important	81,5
	neither important / nor unimportant	11,1
	unimportant	7,4
	Total	100,0

Tab 2.2.12: How important are information about forthcoming solutions latest trends and future developments in the training market in three years

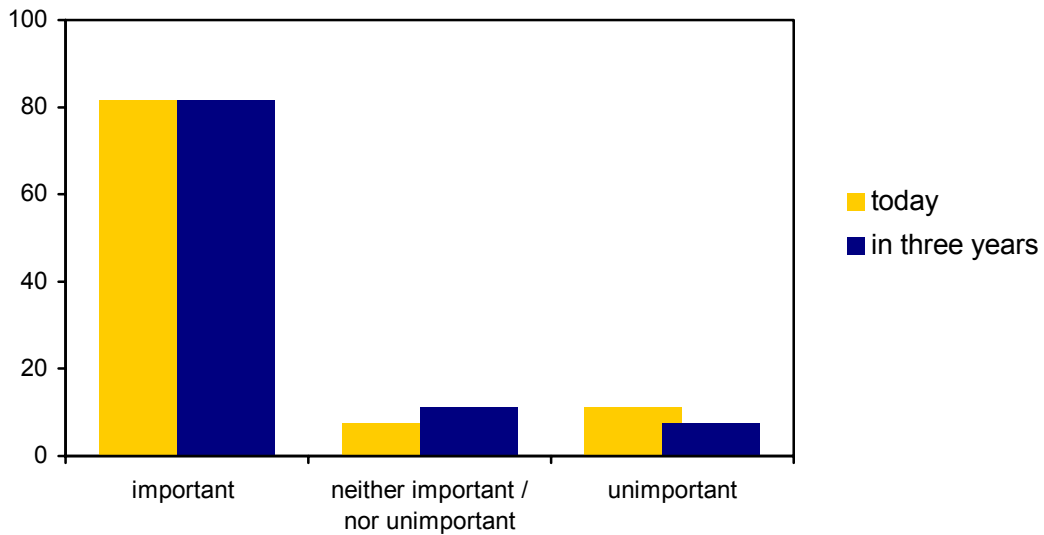


Fig 2.2.1: How important are information about forthcoming solutions latest trends and future developments in the training market

		Percentage
N=27	important	96,3
	neither important / nor unimportant	3,7
Total		100,0

Tab 2.2.21: How important is a cost-benefit analysis of companies to implement e-learning activities today

		Percentage
N=27	important	96,3
	neither important / nor unimportant	3,7
Total		100,0

Tab 2.2.22: How important is a cost-benefit analysis of companies to implement e-learning activities in three years

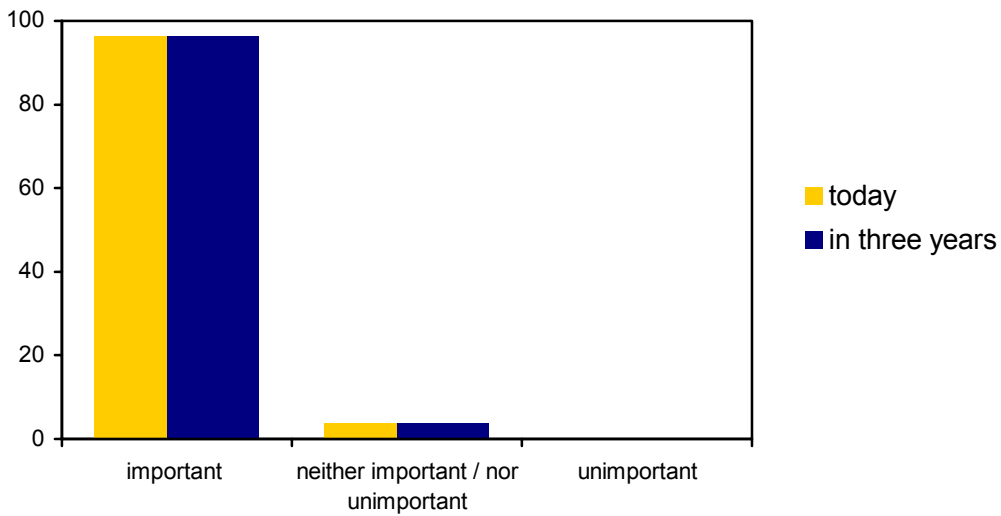


Fig 2.2.2: How important is a cost-benefit analysis of companies to implement e-learning activities

Section 3: Standardisation vs. customization

		Percentage
N=27	high	24,0
	medium	52,0
	low	24,0
	Total	100,0

Tab 2.3.11: The demand on standardised training products today is

		Percentage
N=27	high	44,4
	medium	37,0
	low	18,5
	Total	100,0

Tab 2.3.12: The demand on standardised training products in three years will be

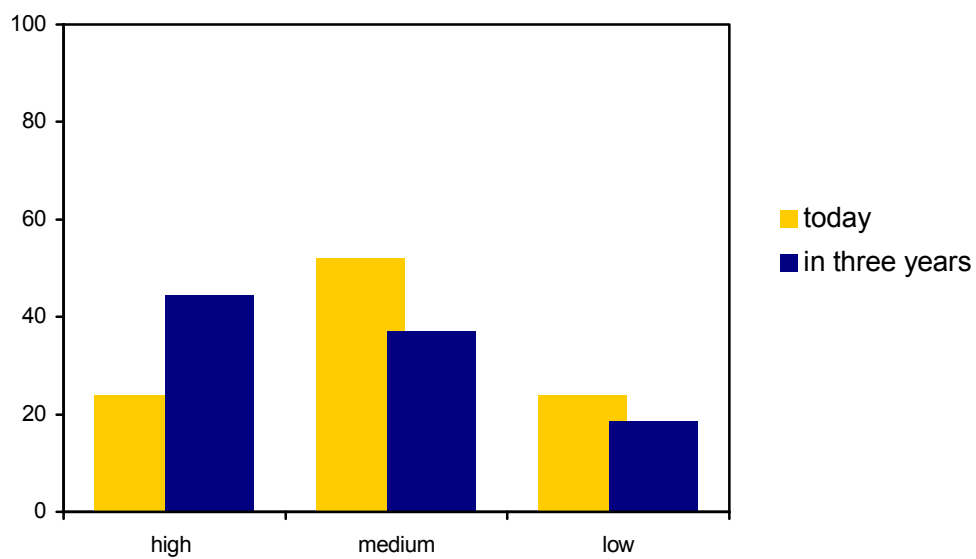


Fig 2.3.1: The demand on standardised training products is

		Percentage
N=27	high	73,1
	medium	23,1
	low	3,8
	Total	100,0

Tab 2.3.21: The demand on customized training products today is

		Percentage
N=27	high	96,3
	medium	3,7
	Total	100,0

Tab 2.3.22: The demand on customized training products in three years will be

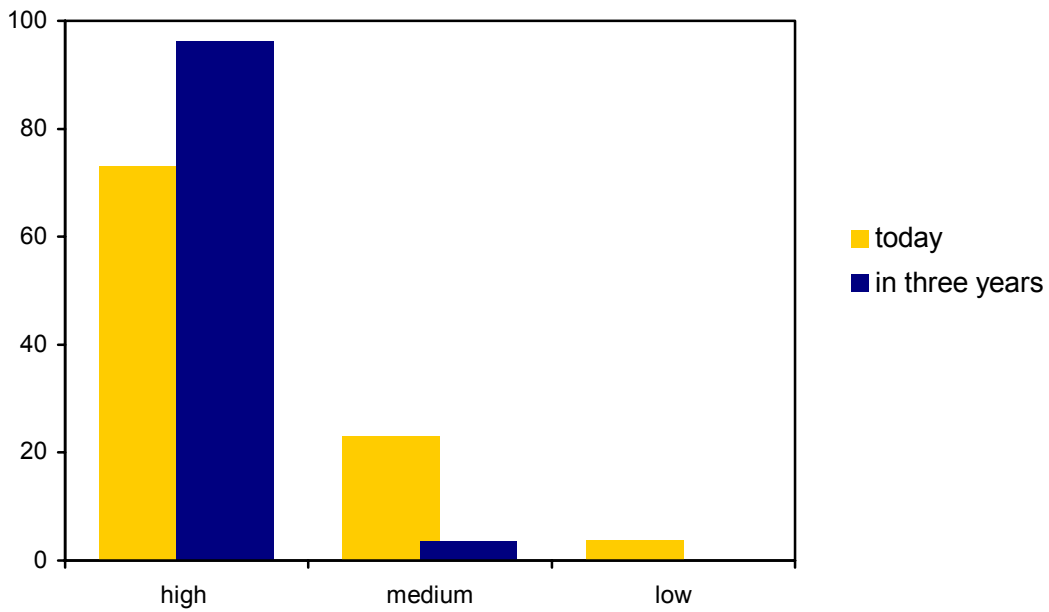


Fig 2.3.2: The demand on customized training products is

		Percentage
N=27	high	45,8
	medium	20,8
	Low	33,3
	Total	100,0

Tab 2.3.31: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities today is

		Percentage
N=27	high	79,2
	medium	12,5
	low	8,3
	Total	100,0

Tab 2.3.32: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities in three years will be

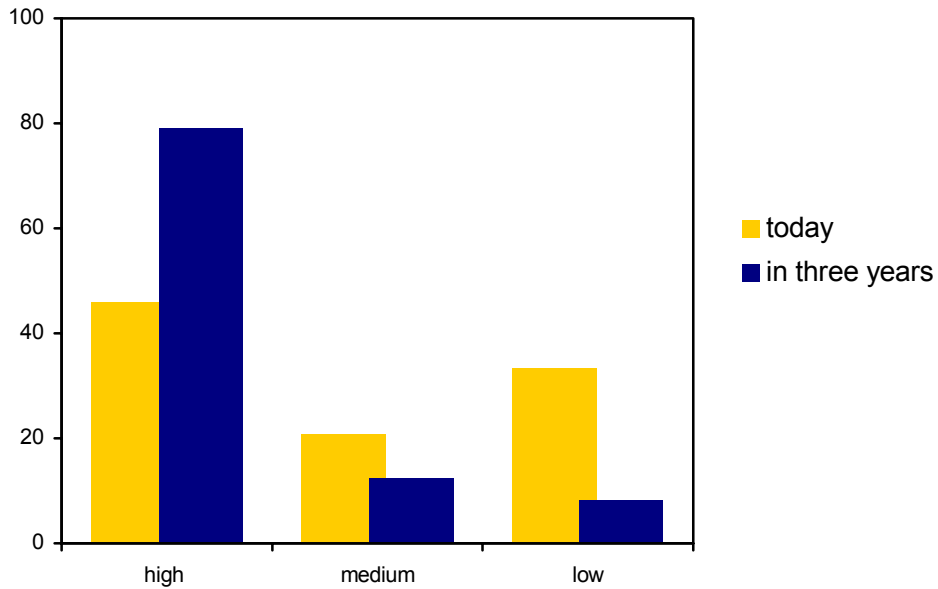


Fig 2.3.3: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities is

Section 4: Content-orientation

		Percentage
N=27	high	38,5
	medium	34,6
	low	26,9
	Total	100,0

Tab 2.4.11: The demand on support to advance in workplace position today is

		Percentage
N=27	high	80,0
	medium	8,0
	low	12,0
	Total	100,0

Tab 2.4.12: The demand on support to advance in workplace position in three years will be

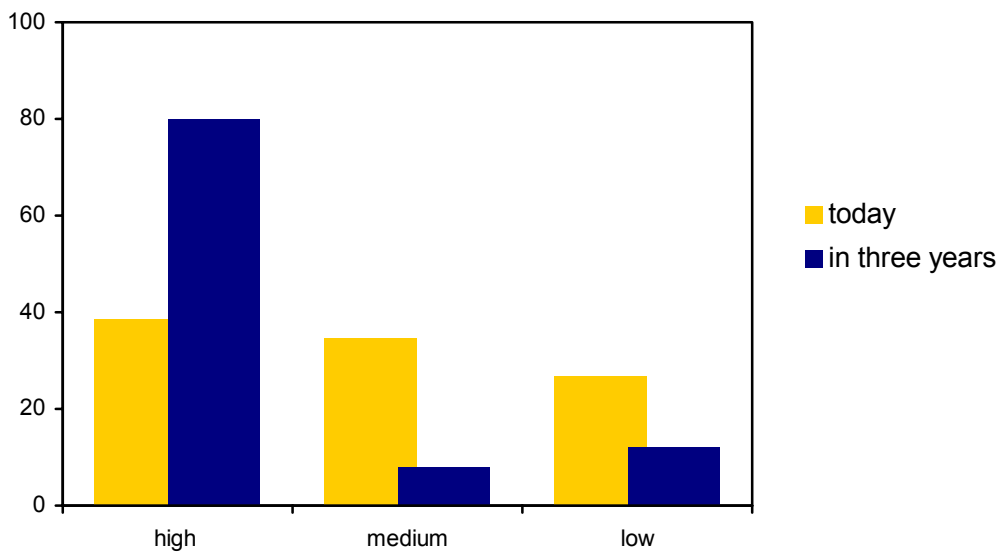


Fig 2.4.1: The demand on support to advance in workplace position is

		Percentage
N=27	high	50,0
	medium	37,5
	low	12,5
	Total	100,0

Tab 2.4.21: The demand on vocational and occupational retraining today is

		Percentage
N=27	high	70,8
	medium	20,8
	low	8,3
	Total	100,0

Tab 2.4.22: The demand on vocational and occupational retraining in three years will be

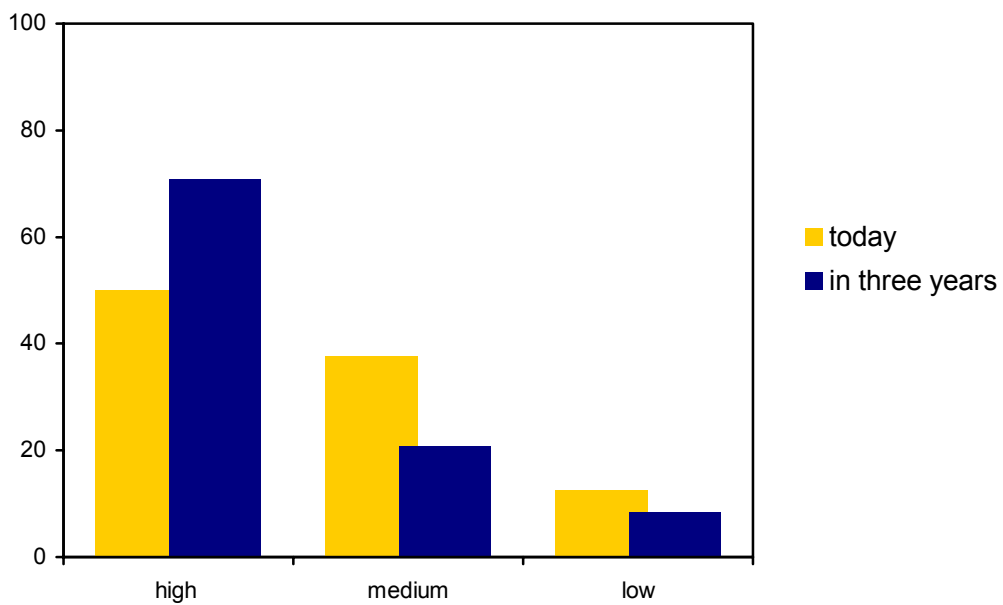


Fig 2.4.2: The demand on vocational and occupational retraining is

		Percentage
N=27	high	63,0
	medium	22,2
	low	14,8
	Total	100,0

Tab 2.4.31: The demand for a adjustment to a new job today is

		Percentage
N=27	high	84,6
	medium	15,4
	Total	100,0

Tab 2.4.32: The demand for a adjustment to a new job in three years will be

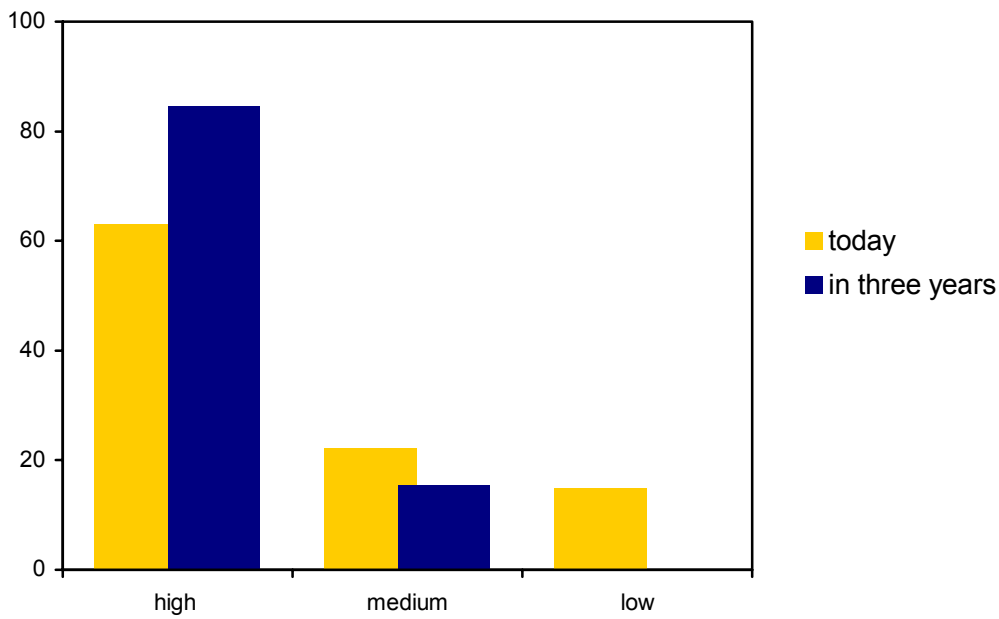


Fig 2.4.3: The demand for a adjustment to a new job is

		Percentage
N=27	high	42,3
	medium	53,8
	low	3,8
	Total	100,0

Tab 2.4.41: The demand to provide staff for new working tasks today is

		Percentage
N=27	high	72,0
	medium	20,0
	low	8,0
	Total	100,0

Tab 2.4.42: The demand to provide staff for new working tasks in three years will be

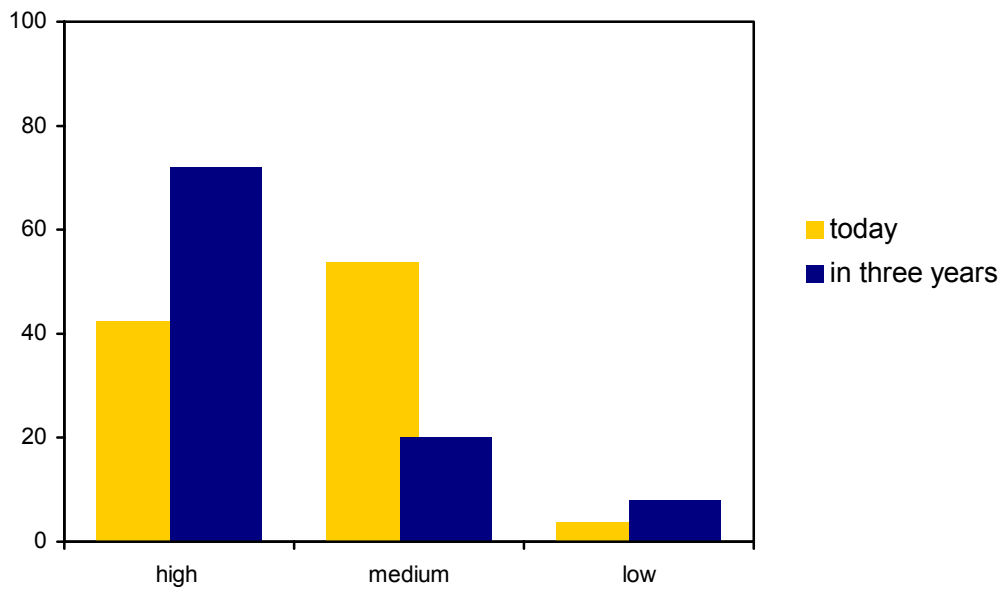


Fig 2.4.4: The demand to provide staff for new working tasks is

Section 5: Potential user groups

		Percentage
N=27	important	77,8
	neither important / nor unimportant	7,4
	unimportant	14,8
	Total	100,0

Tab 2.5.11: Training opportunities for young staff today is

		Percentage
N=27	important	92,3
	neither important / nor unimportant	7,7
	Total	100,0

Tab 2.5.12: Training opportunities for young staff in three years will be

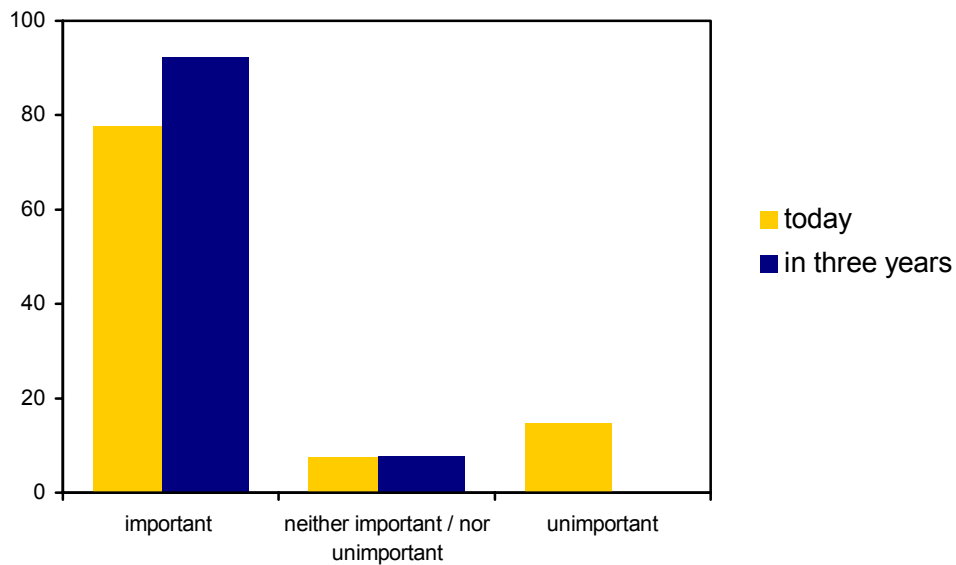


Fig 2.5.1: Training opportunities for young staff is

		Percentage
N=27	important	70,4
	neither important / nor unimportant	18,5
	unimportant	11,1
	Total	100,0

Tab 2.5.21: The Maintaining employability through continuing education and training by gaining qualifications at a later stage today is

		Percentage
N=27	important	84,6
	neither important / nor unimportant	11,5
	unimportant	3,8
	Total	100,0

Tab 2.5.22: The Maintaining employability through continuing education and training by gaining qualifications at a later stage in three years will be

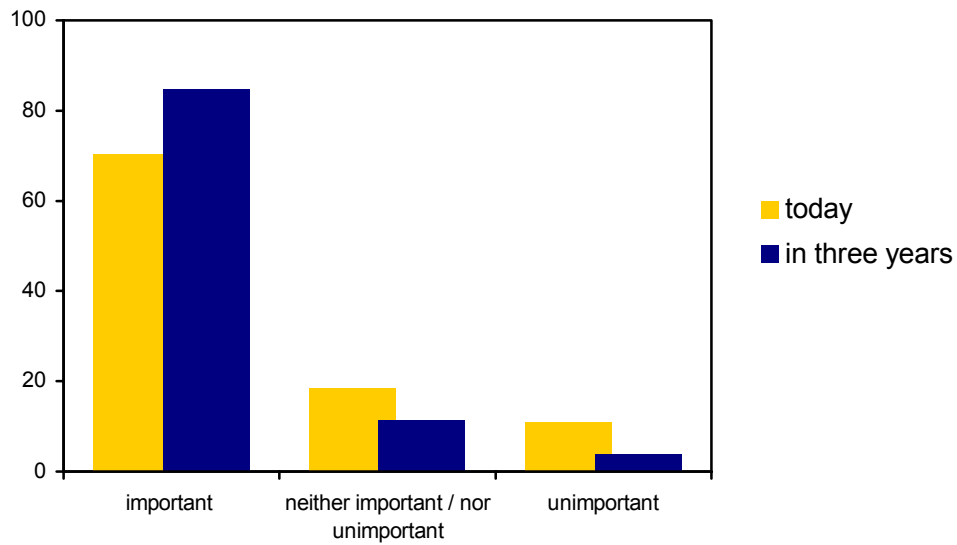


Fig 2.5.2: The Maintaining employability through continuing education and training by gaining qualifications at a later stage is

		Percentage
N=27	important	55,6
	neither important / nor unimportant	29,6
	unimportant	14,8
	Total	100,0

Tab 2.5.31: Today equal opportunities for women in training and employment are

		Percentage
N=27	important	80,8
	neither important / nor unimportant	15,4
	unimportant	3,8
	Total	100,0

Tab 2.5.32: In three years equal opportunities for women in training and employment will be

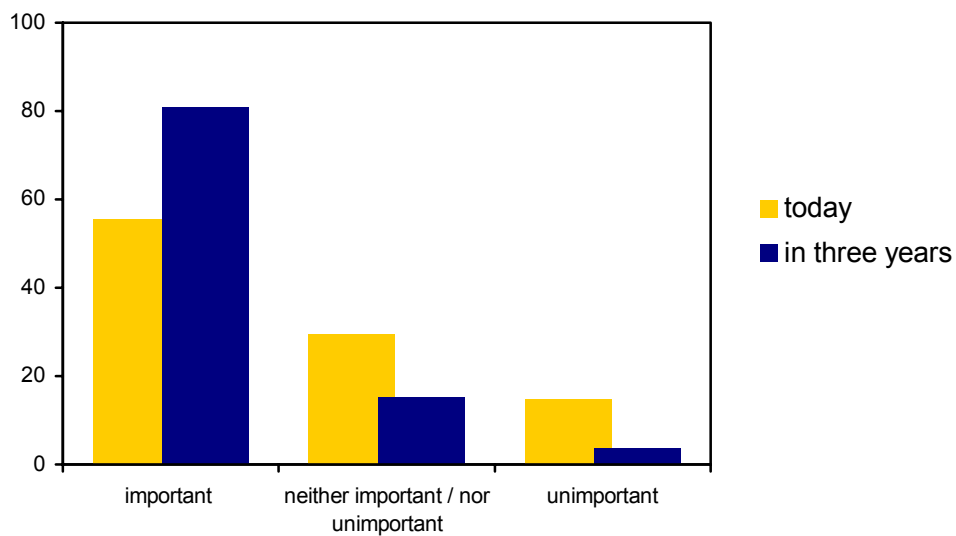


Fig 2.5.3: Equal opportunities for women in training and employment are

		Percentage
N=27	important	57,7
	neither important / nor unimportant	23,1
	unimportant	19,2
	Total	100,0

Tab 2.5.41: Today equal opportunities for migrants in training and employment are

		Percentage
N=27	important	65,4
	neither important / nor unimportant	30,8
	unimportant	3,8
	Total	100,0

Tab 2.5.42: In three years equal opportunities for migrants in training and employment will be

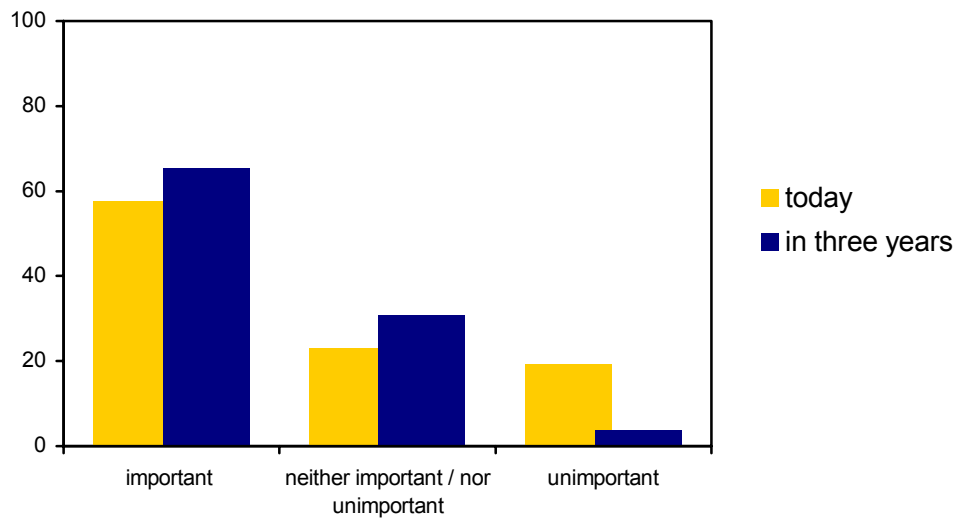


Fig 2.5.4: Equal opportunities for migrants in training and employment are

		Percentage
N=27	important	25,9
	neither important / nor unimportant	29,6
	unimportant	44,4
	Total	100,0

Tab 2.5.51: Today the use of the employment and qualification potential of older people is

		Percentage
N=27	important	69,2
	neither important / nor unimportant	23,1
	unimportant	7,7
	Total	100,0

Tab 2.5.52: In three years the use of the employment and qualification potential of older people will be

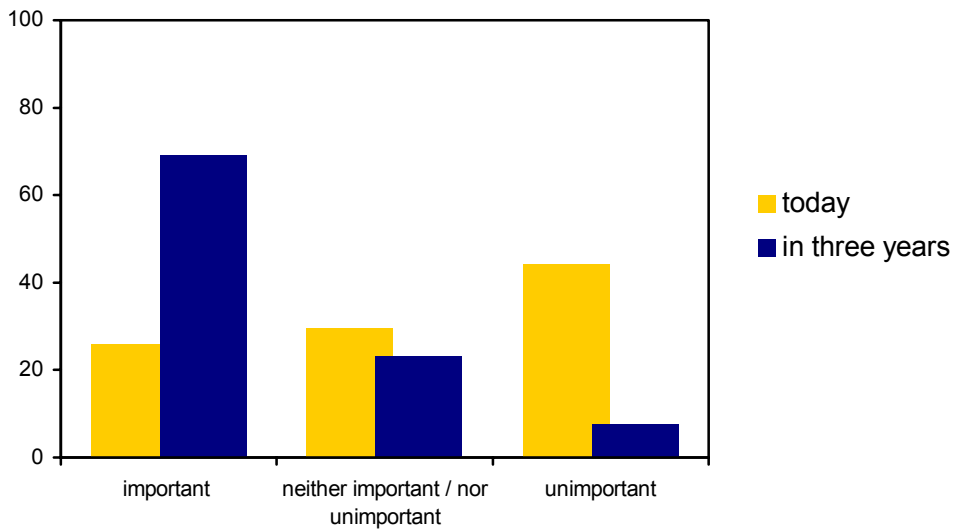


Fig 2.5.5: The use of the employment and qualification potential of older people is

Section 6: Specific professional learning tasks

		Percentage
N=27	important	65,4
	neither important / nor unimportant	19,2
	unimportant	15,4
	Total	100,0

Tab 2.6.11: Today the management of staff in the area of professional training is

		Percentage
N=27	important	84,6
	neither important / nor unimportant	15,4
	Total	100,0

Tab 2.6.12: In three years the management of staff in the area of professional training will be

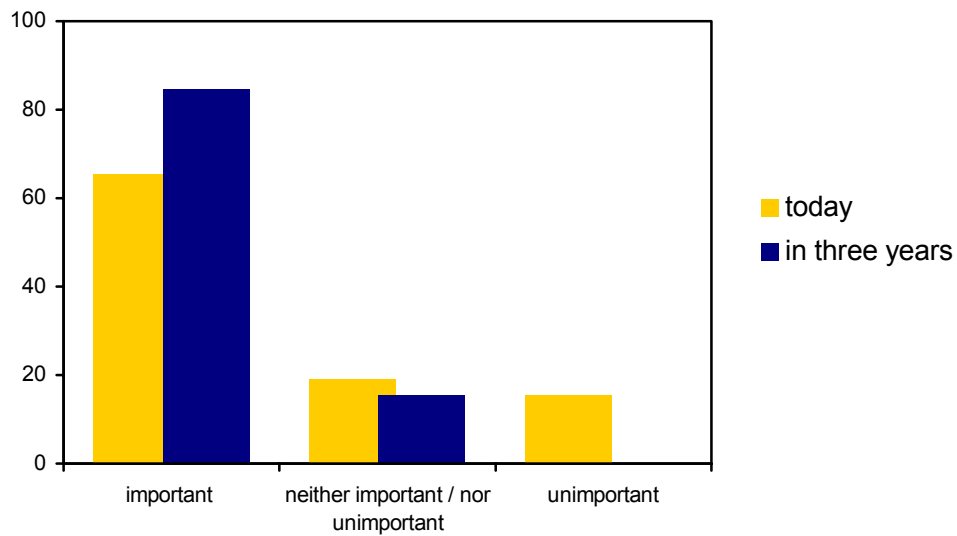


Fig 2.6.1: The management of staff in the area of professional training is

		Percentage
N=27	important	76,9
	neither important / nor unimportant	15,4
	unimportant	7,7
	Total	100,0

Tab 2.6.21: Today topics of Marketing & Distribution in the area of professional training are

		Percentage
N=27	important	92,0
	neither important / nor unimportant	8,0
	Total	100,0

Tab 2.6.22: In three years topics of Marketing & Distribution in the area of professional training will be

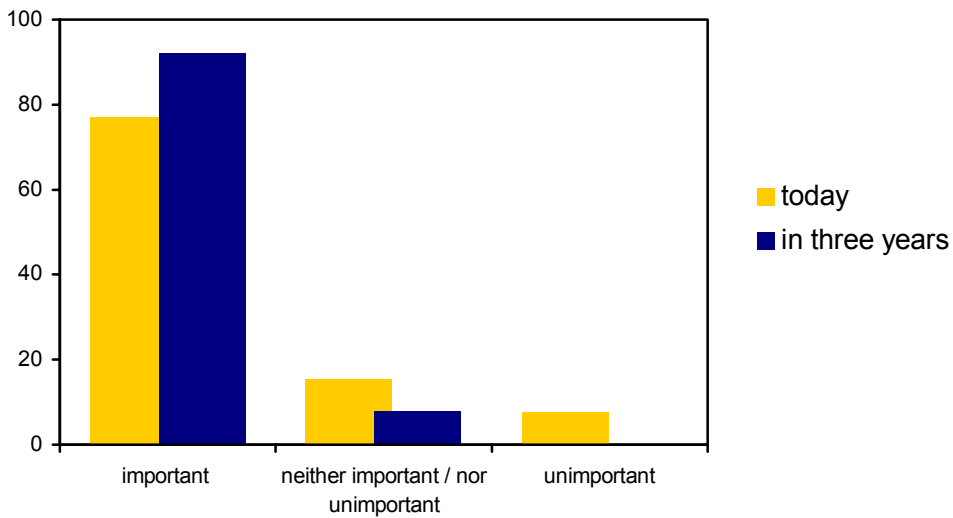


Fig 2.6.2: Topics of Marketing & Distribution in the area of professional training are

		Percentage
N=27	important	84,6
	neither important / nor unimportant	11,5
	unimportant	3,8
	Total	100,0

Tab 2.6.31: Today communication tasks in the area of professional training are

		Percentage
N=27	important	92,3
	neither important / nor unimportant	7,7
	Total	100,0

Tab 2.6.32: In three years communication tasks in the area of professional training will be

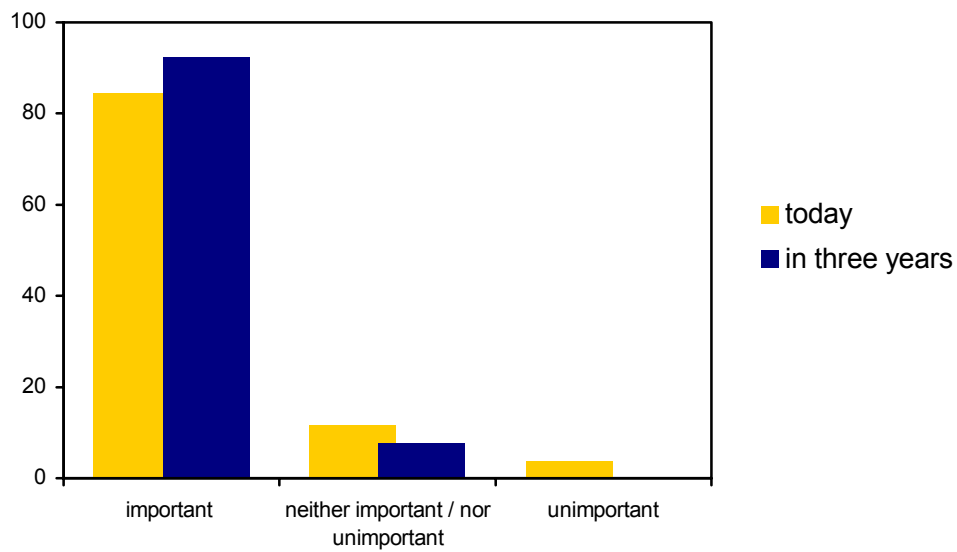


Fig 2.6.3: Communication tasks in the area of professional training are

		Percentage
N=27	important	84,6
	neither important / nor unimportant	11,5
	unimportant	3,8
	Total	100,0

Tab 2.6.41: Today quality management in the area of professional training is

		Percentage
N=27	important	96,2
	neither important / nor unimportant	3,8
	Total	100,0

Tab 2.6.42: In three years quality management in the area of professional training will be

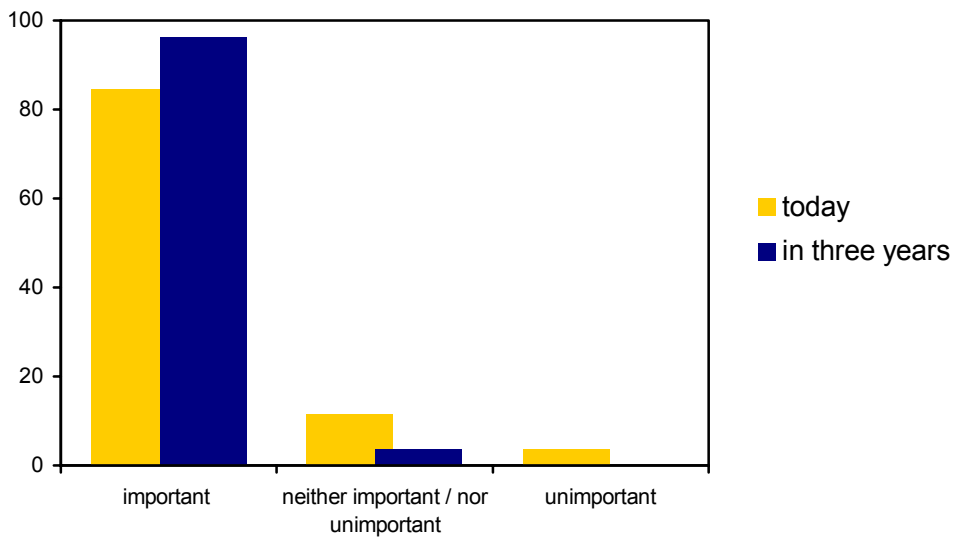


Fig 2.6.4: Quality management in the area of professional training is

		Percentage
N=27	important	61,5
	neither important / nor unimportant	34,6
	unimportant	3,8
	Total	100,0

Tab 2.6.51: Today product management in the area of professional training is

		Percentage
N=27	important	84,0
	neither important / nor unimportant	16,0
	Total	100,0

Tab 2.6.52: In three years product management in the area of professional training will be

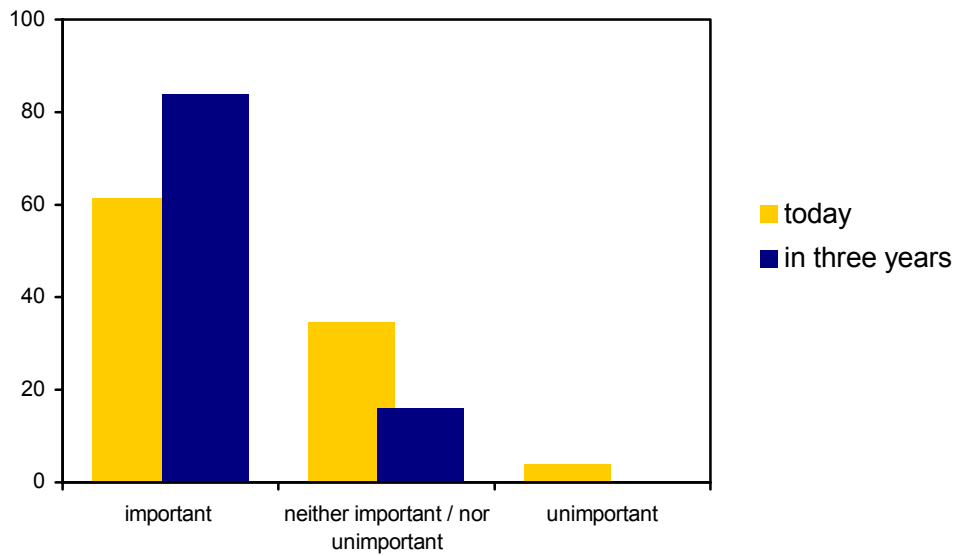


Fig 2.6.5: Product management in the area of professional training is

		Percentage
N=27	important	74,1
	neither important / nor unimportant	22,2
	unimportant	3,7
	Total	100,0

Tab 2.6.61: Today cost management in the area of professional training is

		Percentage
N=27	important	88,5
	neither important / nor unimportant	11,5
	Total	100,0

Tab 2.6.62: In three years cost management in the area of professional training will be

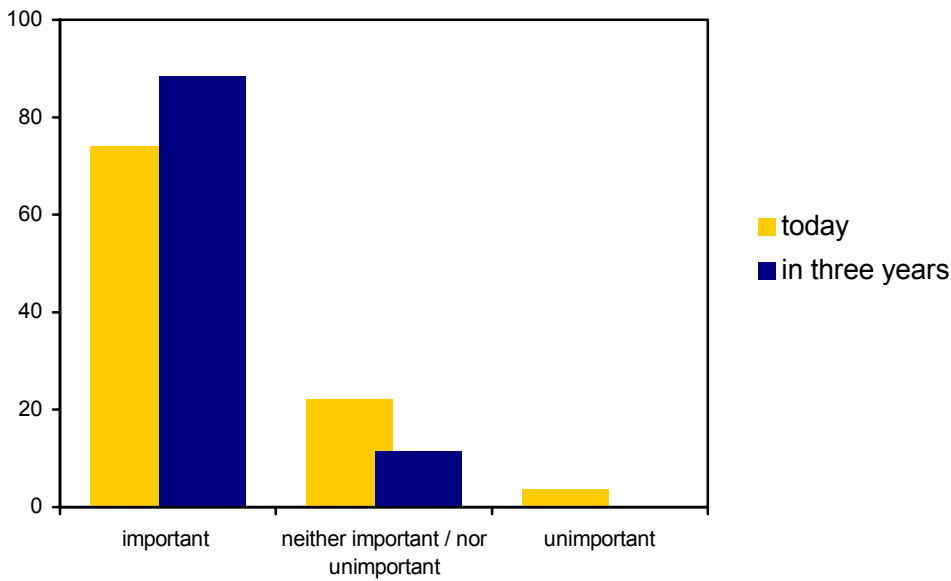


Fig 2.6.6: Cost management in the area of professional training is

		Percentage
N=27	important	53,8
	neither important / nor unimportant	34,6
	unimportant	11,5
	Total	100,0

Tab 2.6.71: Today human resource Management in the area of professional training is

		Percentage
N=27	important	65,4
	neither important / nor unimportant	34,6
	Total	100,0

Tab 2.6.72: In three years human resource Management in the area of professional training will be

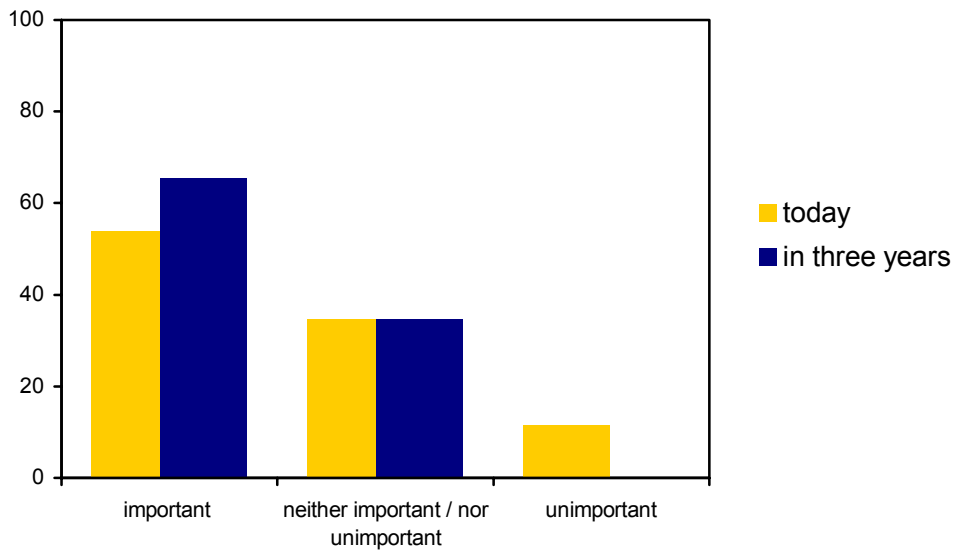


Fig 2.6.7: Human resource Management in the area of professional training is

		Percentage
N=27	important	50,0
	neither important / nor unimportant	30,8
	unimportant	19,2
	Total	100,0

Tab 2.6.81: Today environment protection questions are

		Percentage
N=27	important	72,0
	neither important / nor unimportant	24,0
	unimportant	4,0
	Total	100,0

Tab 2.6.82: In three years environment protection questions will be

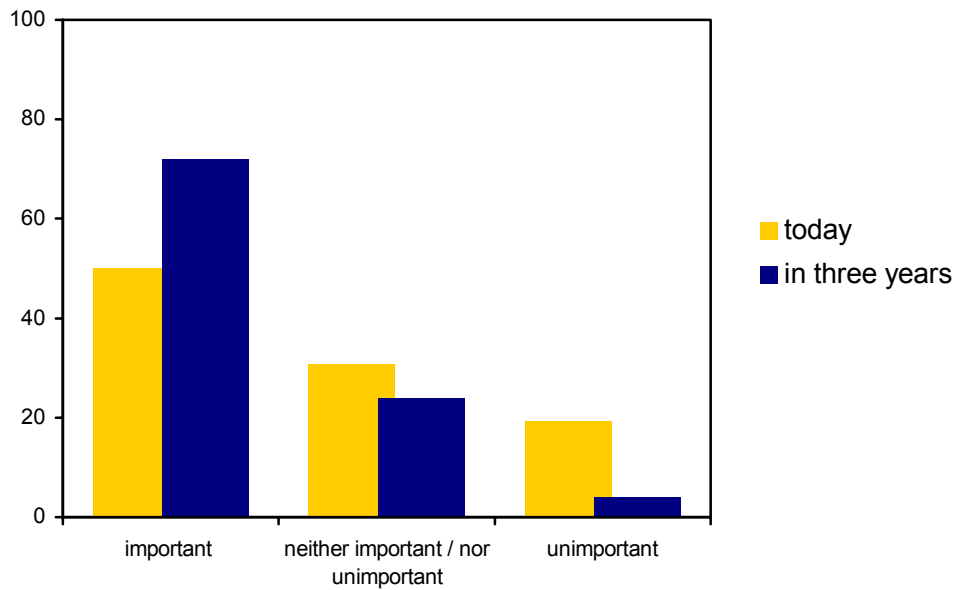


Fig 2.6.8: Environment protection questions are

		Percentage
N=27	important	44,4
	neither important / nor unimportant	37,0
	unimportant	18,5
	Total	100,0

Tab 2.6.91: Today train the trainer tasks are

		Percentage
N=27	important	73,1
	neither important / nor unimportant	19,2
	unimportant	7,7
	Total	100,0

Tab 2.6.92: In three years train the trainer tasks will be

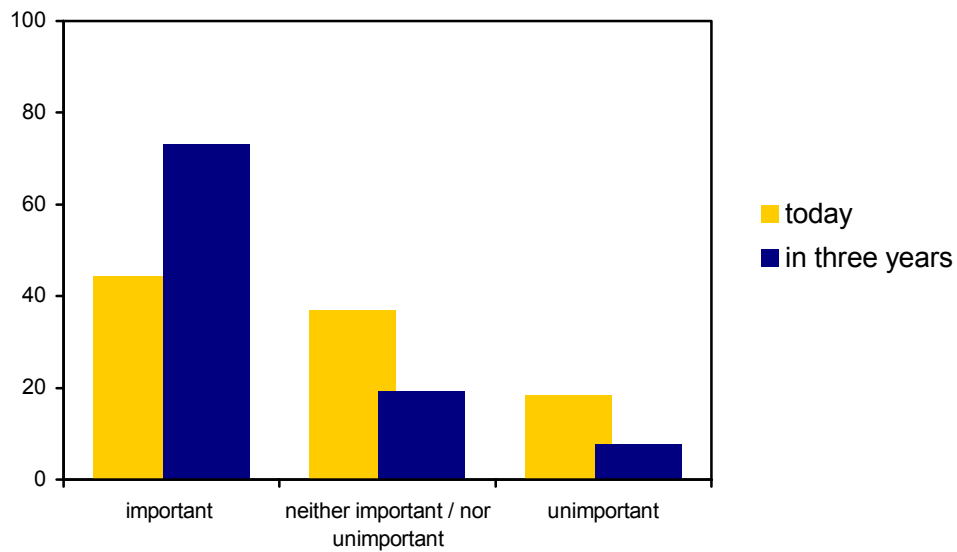


Fig 2.6.9: Train the trainer tasks are

		Percentage
N=27	important	65,4
	neither important / nor unimportant	26,9
	unimportant	7,7
	Total	100,0

Tab 2.6.101: Today languages and intercultural training is

		Percentage
N=27	important	76,9
	neither important / nor unimportant	19,2
	unimportant	3,8
	Total	100,0

Tab 2.6.102: In three years languages and intercultural training will be

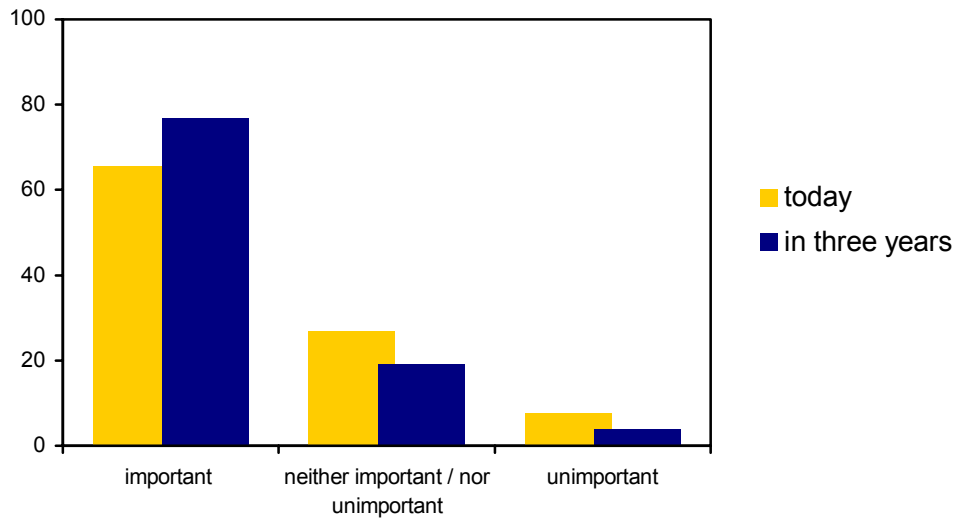


Fig 2.6.10: Languages and intercultural training is

		Percentage
N=27	important	74,1
	neither important / nor unimportant	25,9
	Total	100,0

Tab 2.6.111: Today computer application training is

		Percentage
N=27	important	76,9
	neither important / nor unimportant	19,2
	unimportant	3,8
	Total	100,0

Tab 2.6.112: In three years computer application training will be

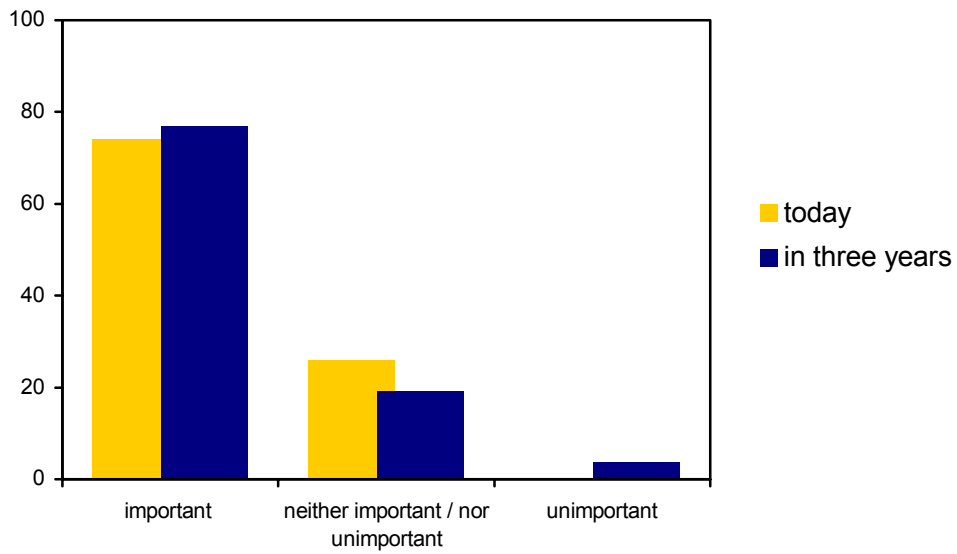


Fig 2.6.11: Computer application training is

		Percentage
N=27	important	53,8
	neither important / nor unimportant	38,5
	unimportant	7,7
	Total	100,0

Tab 2.6.121: Today corporate culture in the area of professional training is

		Percentage
N=27	important	69,2
	neither important / nor unimportant	23,1
	unimportant	7,7
	Total	100,0

Tab 2.6.122: In three years corporate culture in the area of professional training will be

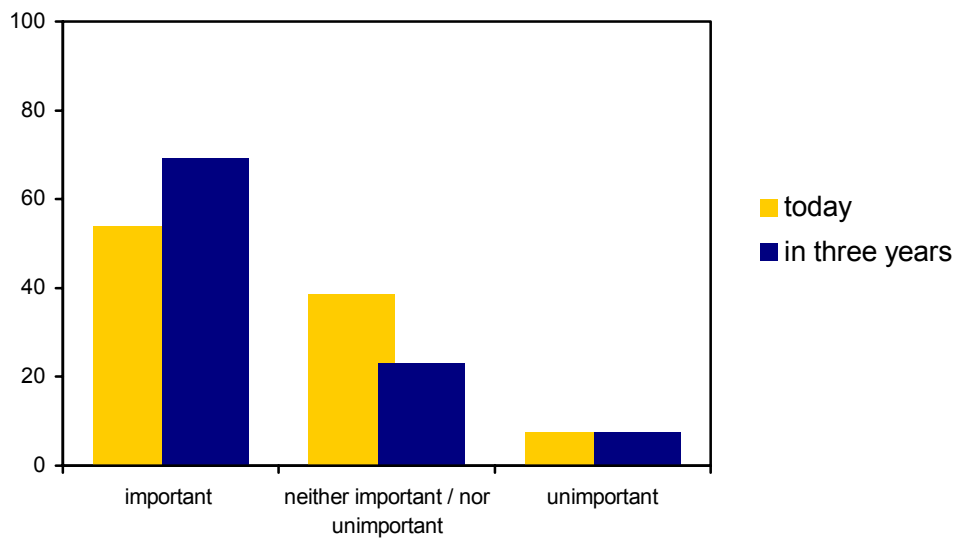


Fig 2.6.12: Corporate culture in the area of professional training is

		Percentage
N=27	important	34,6
	neither important / nor unimportant	53,8
	unimportant	11,5
	Total	100,0

Tab 2.6.131: Today office organisation training is

		Percentage
N=27	important	38,5
	neither important / nor unimportant	53,8
	unimportant	7,7
	Total	100,0

Tab 2.6.132: In three years office organisation training will be

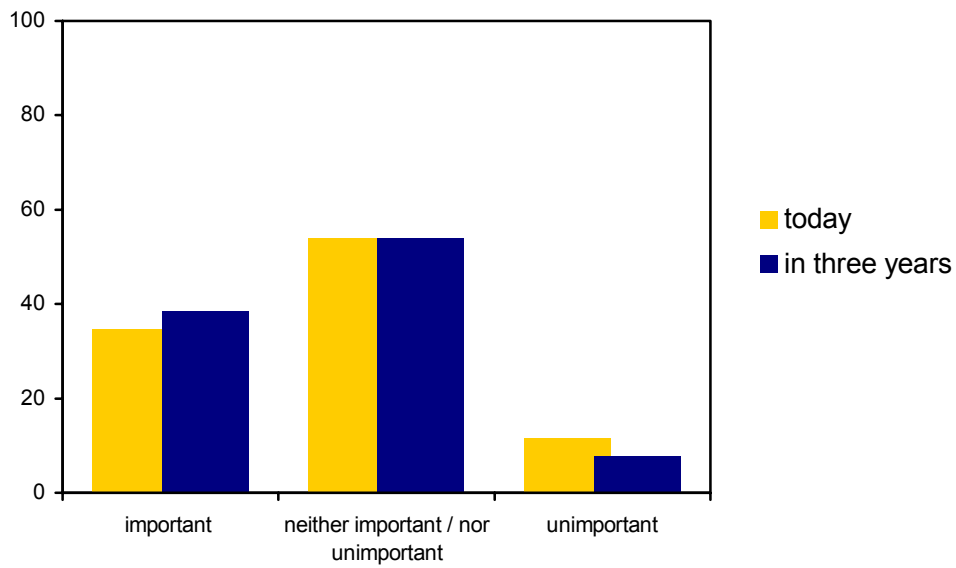


Fig 2.6.13: Office organisation training is

		Percentage
N=27	important	29,2
	neither important / nor unimportant	50,0
	unimportant	20,8
	Total	100,0

Tab 2.6.141: Today training in the thematic area of Law is

		Percentage
N=27	important	50,0
	neither important / nor unimportant	41,7
	unimportant	8,3
	Total	100,0

Tab 2.6.142: In three years training in the thematic area of Law will be

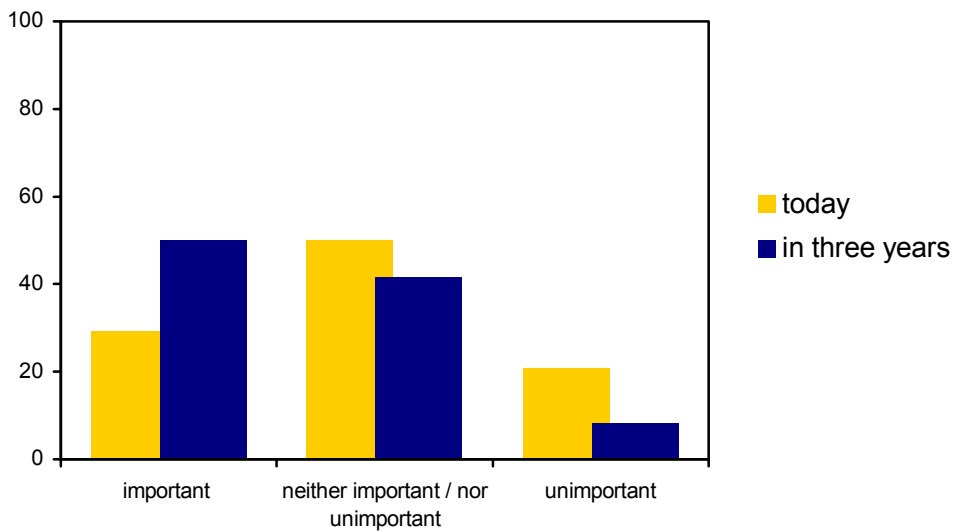


Fig 2.6.14: Training in the thematic area of Law is

RESEARCH TODAY AND IN THREE YEARS

Section 1: market transparency

		Percentage
N=120	easy	31,9
	sometimes easy / sometimes difficult	42,2
	difficult	25,9
	Total	100,0

Tab 3.1.11: To receive information about the suppliers and their product or services today

		Percentage
N=120	easy	59,6
	sometimes easy / sometimes difficult	27,2
	difficult	13,2
	Total	100,0

Tab 3.1.12: To receive information about the suppliers and their product or services in three years

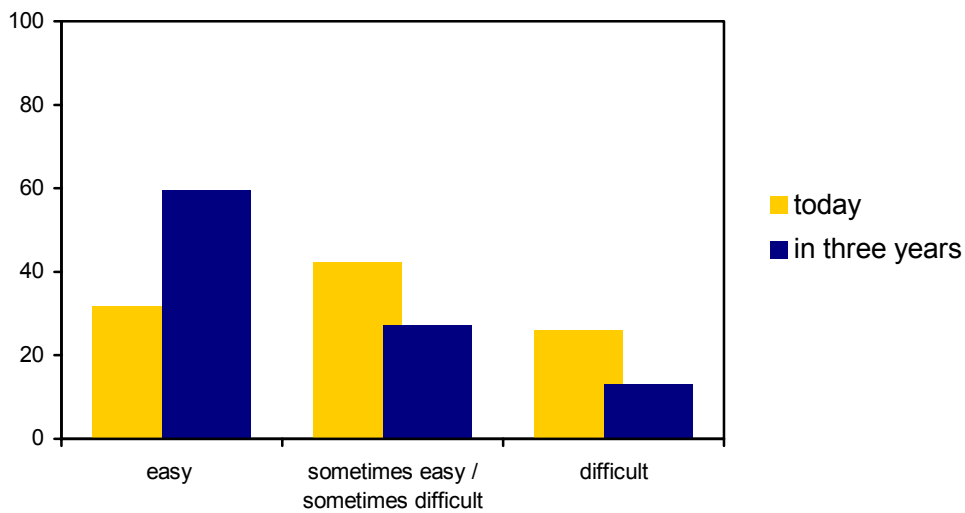


Fig 3.1.1: To receive information about the suppliers and their product or services

		Percentage
N=120	easy	15,4
	sometimes easy / sometimes difficult	31,6
	difficult	53,0
	Total	100,0

Tab 3.1.21: Customers can compare products from the training market

		Percentage
N=120	easy	38,9
	sometimes easy / sometimes difficult	31,0
	difficult	30,1
	Total	100,0

Tab 3.1.22: Customers can compare products from the training market in three years

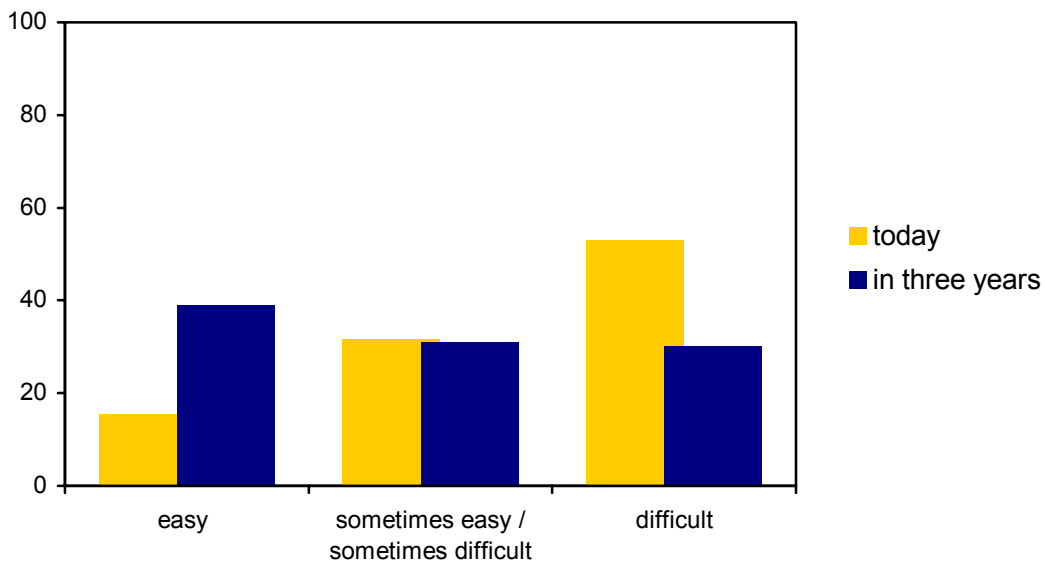


Fig 3.1.2: Customers can compare products from the training market

Section 2: Estimating future activities in e-learning

		Percentage
N=120	important	87,5
	neither important / nor unimportant	9,2
	unimportant	3,3
	Total	100,0

Tab 3.2.11: How important are information about forthcoming solutions latest trends and future developments in the training market today

		Percentage
N=120	important	91,6
	neither important / nor unimportant	7,6
	unimportant	,8
	Total	100,0

Tab 3.2.12: How important are information about forthcoming solutions latest trends and future developments in the training market in three years

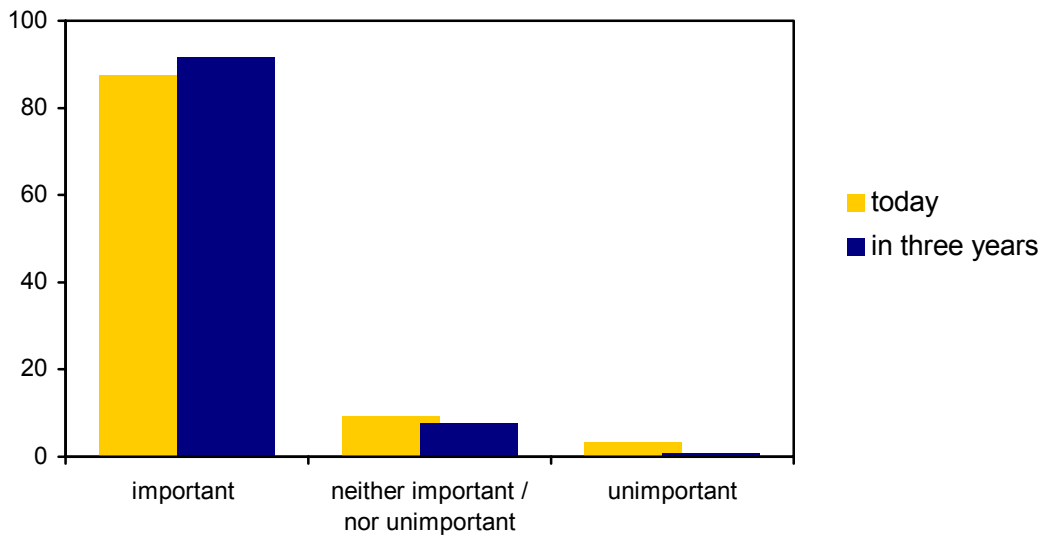


Fig 3.2.1: How important are information about forthcoming solutions latest trends and future developments in the training market

		Percentage
N=120	important	86,6
	neither important / nor unimportant	9,2
	unimportant	4,2
	Total	100,0

Tab 3.2.21: How important is a cost-benefit analysis of companies to implement e-learning activities today

		Percentage
N=120	important	89,9
	neither important / nor unimportant	7,6
	unimportant	2,5
	Total	100,0

Tab 3.2.22: How important is a cost-benefit analysis of companies to implement e-learning activities in three years

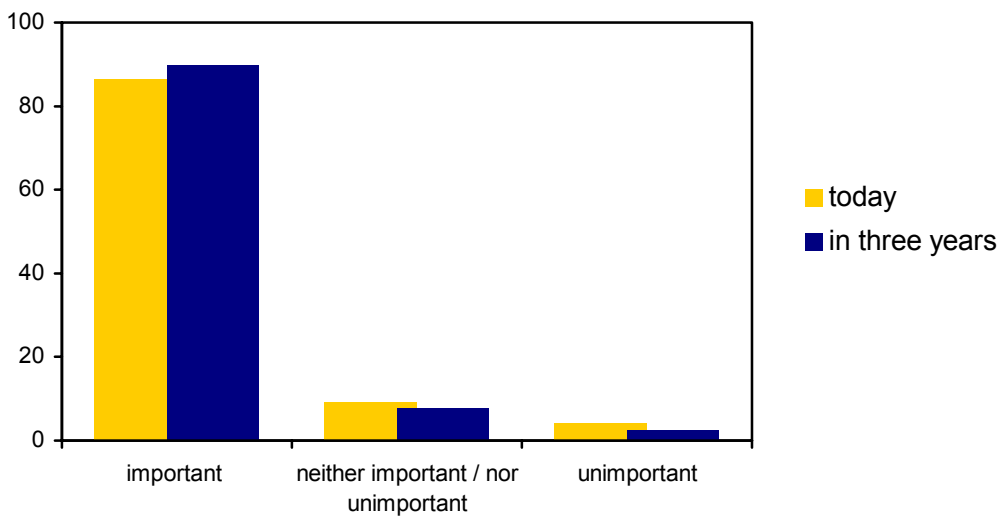


Fig 3.2.2: How important is a cost-benefit analysis of companies to implement e-learning activities

Section 3: Standardisation vs. customization

		Percentage
N=120	high	33,0
	medium	40,0
	low	27,0
	Total	100,0

Tab 3.3.11: The demand on standardised training products today is

		Percentage
N=120	high	62,7
	medium	26,3
	low	11,0
	Total	100,0

Tab 3.3.12: The demand on standardised training products in three years will be

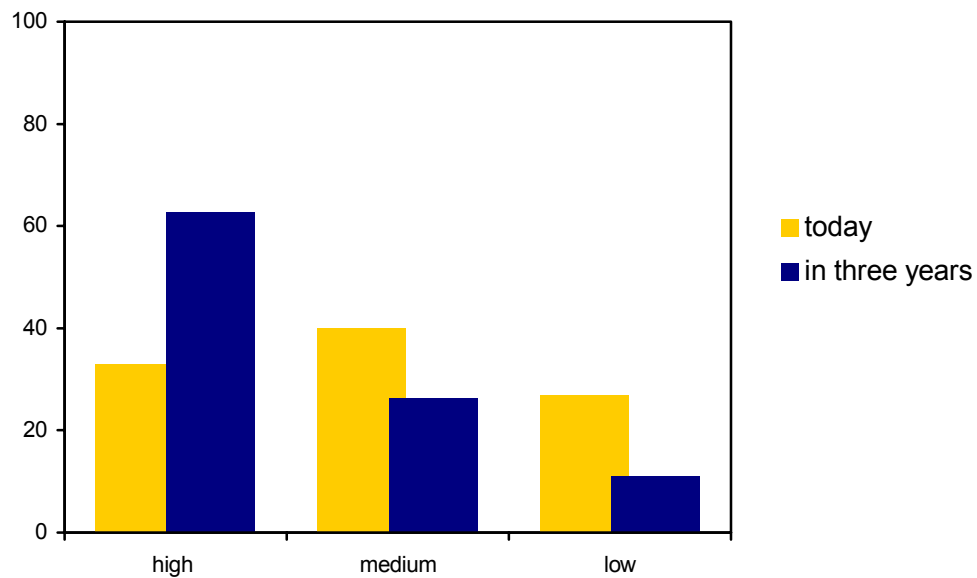


Fig 3.3.1: The demand on standardised training products is

		Percentage
N=120	high	60,3
	medium	25,9
	low	13,8
	Total	100,0

Tab 3.3.21: The demand on customized training products today is

		Percentage
N=120	high	80,2
	medium	17,2
	low	2,6
	Total	100,0

Tab 3.3.22: The demand on customized training products in three years will be

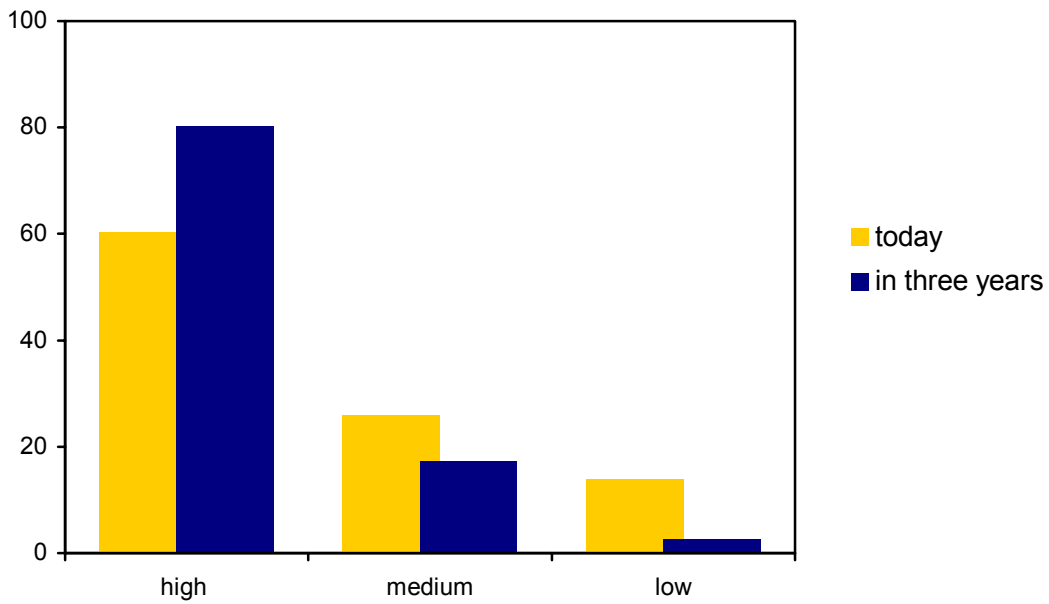


Fig 3.3.2: The demand on customized training products is

		Percentage
N=120	high	30,1
	medium	28,2
	low	41,7
	Total	100,0

Tab 3.3.31: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities today is

		Percentage
N=120	high	67,9
	medium	26,6
	low	5,5
	Total	100,0

Tab 3.3.32: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities in three years will be

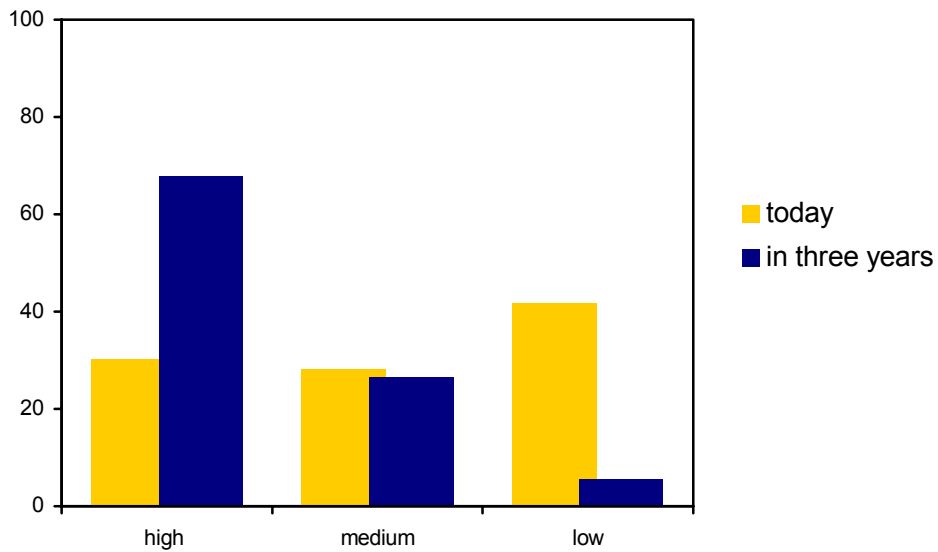


Fig 3.3.3: To measure the cause-and-effect of investment and benefit for the performance of the company by professional learning activities is

Section 4: Content-orientation

		Percentage
N=120	high	40,5
	medium	41,4
	low	18,0
	Total	100,0

Tab 3.4.11: The demand on support to advance in workplace position today is

		Percentage
N=120	high	78,9
	medium	18,4
	low	2,6
	Total	100,0

Tab 3.4.12: The demand on support to advance in workplace position in three years will be

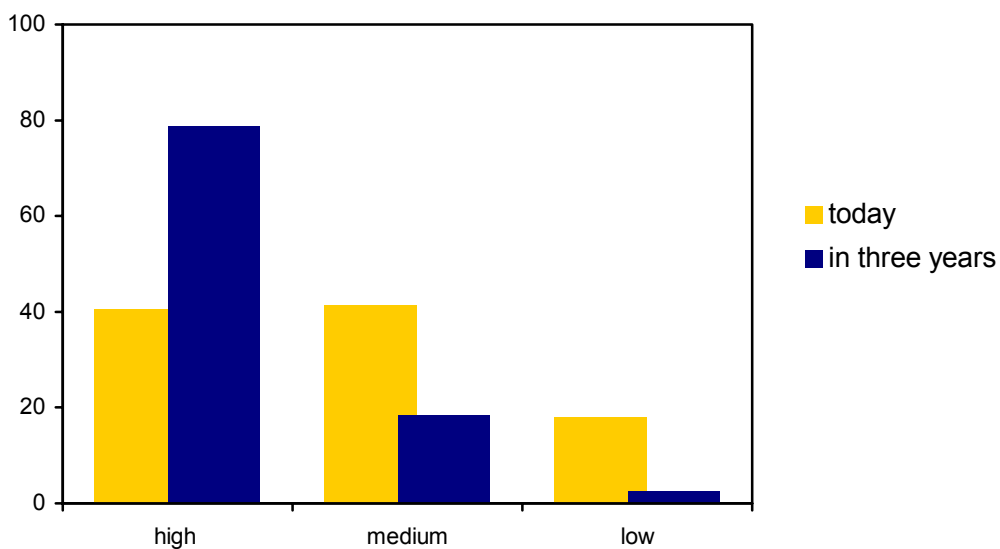


Fig 3.4.1: The demand on support to advance in workplace position is

		Percentage
N=120	high	53,0
	medium	35,7
	low	11,3
	Total	100,0

Tab 3.4.21: The demand on vocational and occupational retraining today is

		Percentage
N=120	high	80,5
	medium	14,4
	low	5,1
	Total	100,0

Tab 3.4.22: The demand on vocational and occupational retraining in three years will be

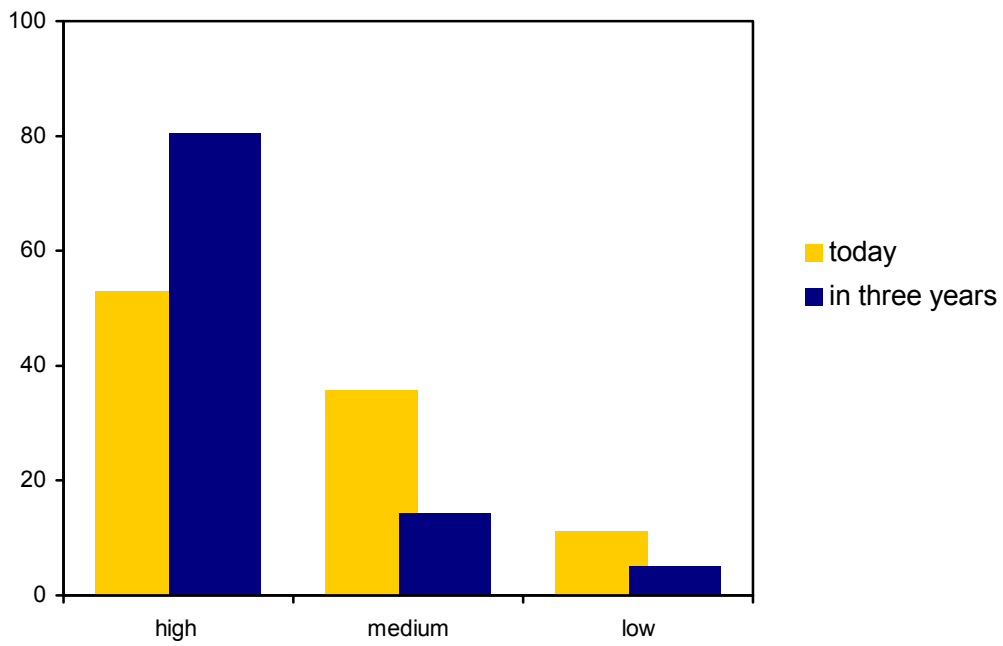


Fig 3.4.2: The demand on vocational and occupational retraining is

		Percentage
N=120	high	58,6
	medium	29,3
	low	12,1
	Total	100,0

Tab 3.4.31: The demand for a adjustment to a new job today is

		Percentage
N=120	high	84,6
	medium	12,8
	low	2,6
	Total	100,0

Tab 3.4.32: The demand for a adjustment to a new job in three years will be

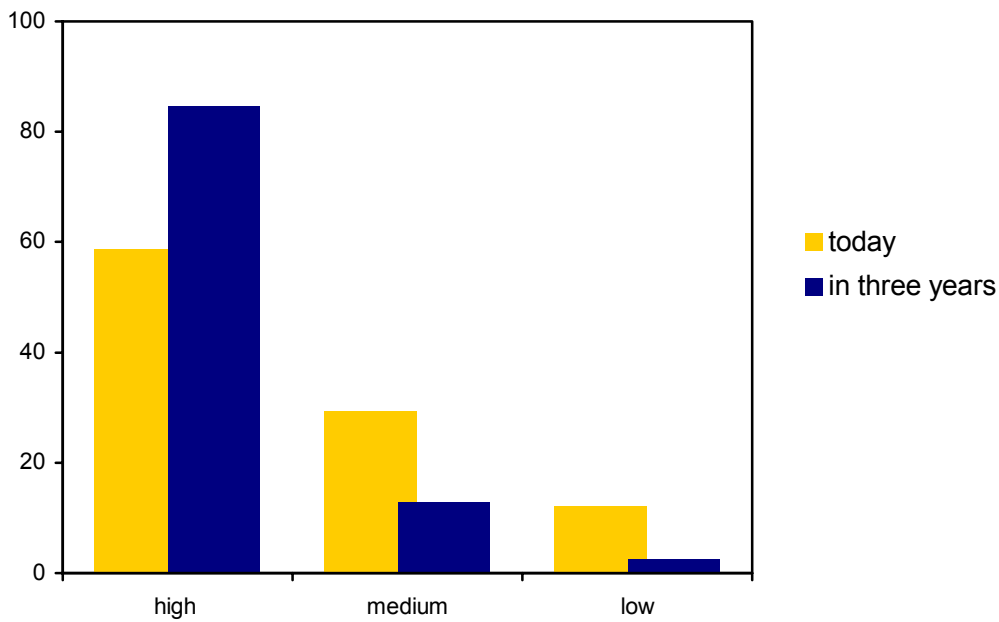


Fig 3.4.3: The demand for a adjustment to a new job is

		Percentage
N=120	high	55,2
	medium	28,4
	low	16,4
	Total	100,0

Tab 3.4.41: The demand to provide staff for new working tasks today is

		Percentage
N=120	high	80,2
	medium	15,5
	low	4,3
	Total	100,0

Tab 3.4.42: The demand to provide staff for new working tasks in three years will be

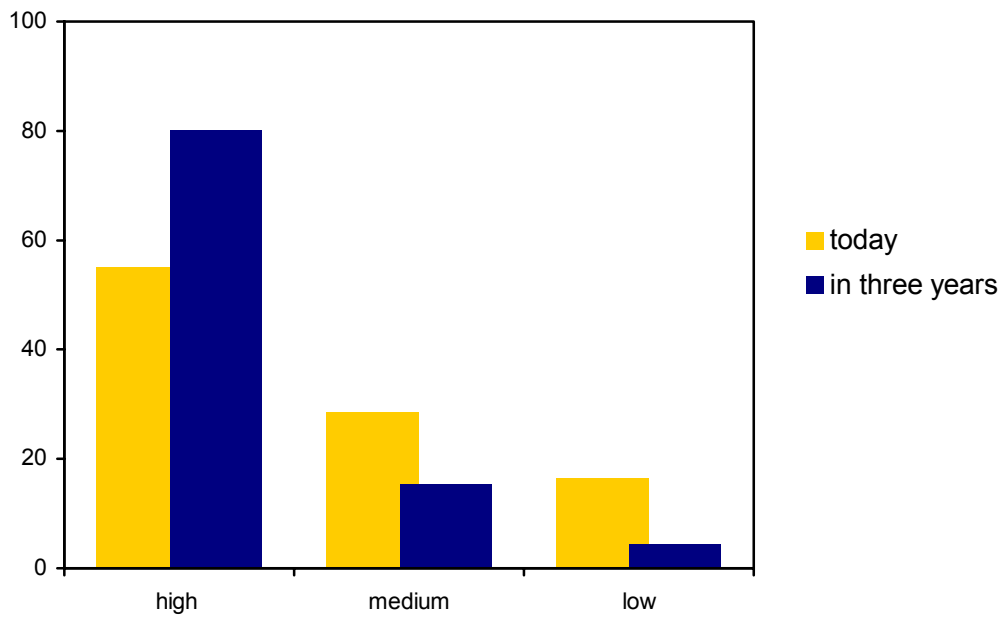


Fig 3.4.4: The demand to provide staff for new working tasks is

Section 5: Potential user groups

		Percentage
N=120	important	75,4
	neither important / nor unimportant	19,5
	unimportant	5,1
	Total	100,0

Tab 3.5.11: Training opportunities for young staff today is

		Percentage
N=120	important	89,9
	neither important / nor unimportant	5,9
	unimportant	4,2
	Total	100,0

Tab 3.5.12: Training opportunities for young staff in three years will be

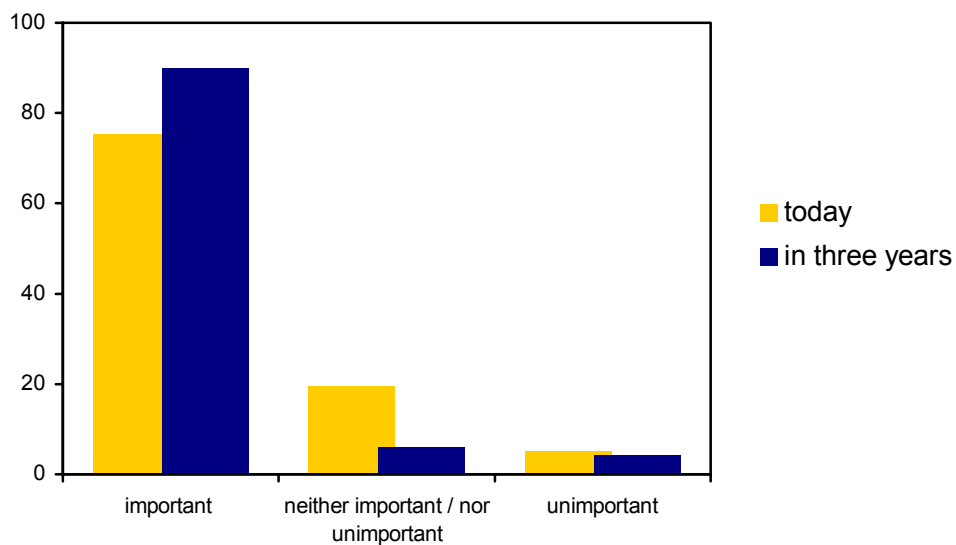


Fig 3.5.1: Training opportunities for young staff is

		Percentage
N=120	important	72,0
	neither important / nor unimportant	18,6
	unimportant	9,3
	Total	100,0

Tab 3.5.21: The Maintaining employability through continuing education and training by gaining qualifications at a later stage today is

		Percentage
N=120	important	89,9
	neither important / nor unimportant	6,7
	unimportant	3,4
	Total	100,0

Tab 3.5.22: The Maintaining employability through continuing education and training by gaining qualifications at a later stage in three years will be

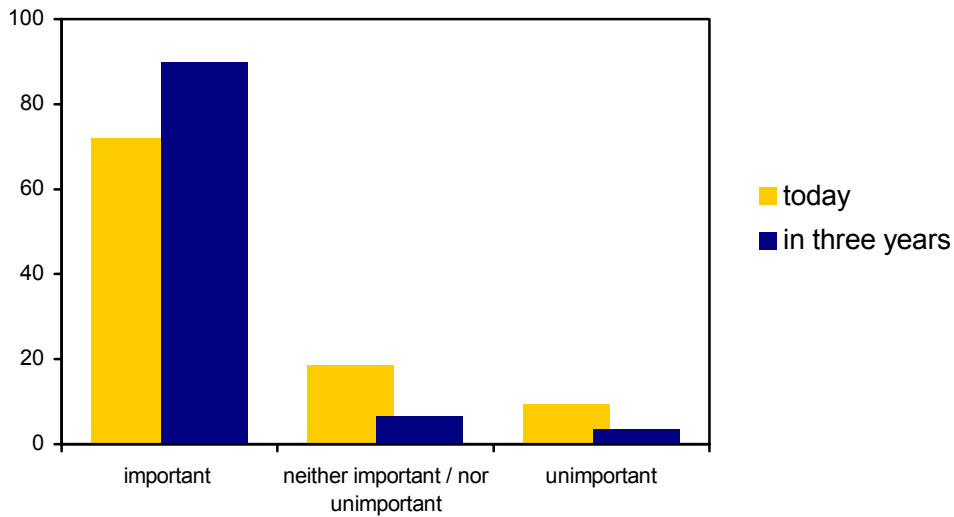


Fig 3.5.2: The Maintaining employability through continuing education and training by gaining qualifications at a later stage is

		Percentage
N=120	important	58,6
	neither important / nor unimportant	32,8
	unimportant	8,6
	Total	100,0

Tab 3.5.31: Today equal opportunities for women in training and employment are

		Percentage
N=120	important	74,1
	neither important / nor unimportant	23,3
	unimportant	2,6
	Total	100,0

Tab 3.5.32: In three years equal opportunities for women in training and employment will be

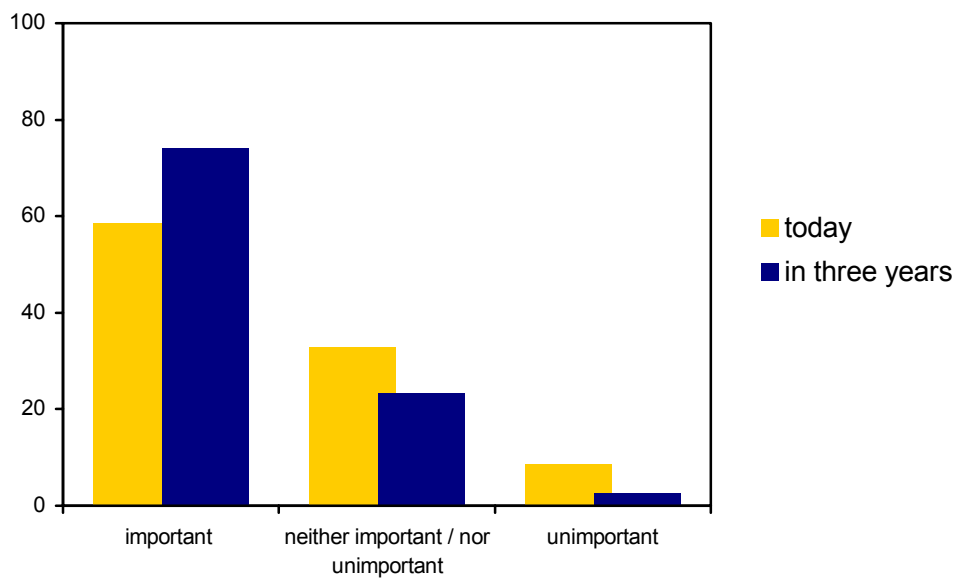


Fig 3.5.3: Equal opportunities for women in training and employment are

		Percentage
N=120	important	54,8
	neither important / nor unimportant	30,4
	unimportant	14,8
	Total	100,0

Tab 3.5.41: Today equal opportunities for migrants in training and employment are

		Percentage
N=120	important	74,1
	neither important / nor unimportant	19,8
	unimportant	6,0
	Total	100,0

Tab 3.5.42: In three years equal opportunities for migrants in training and employment will be

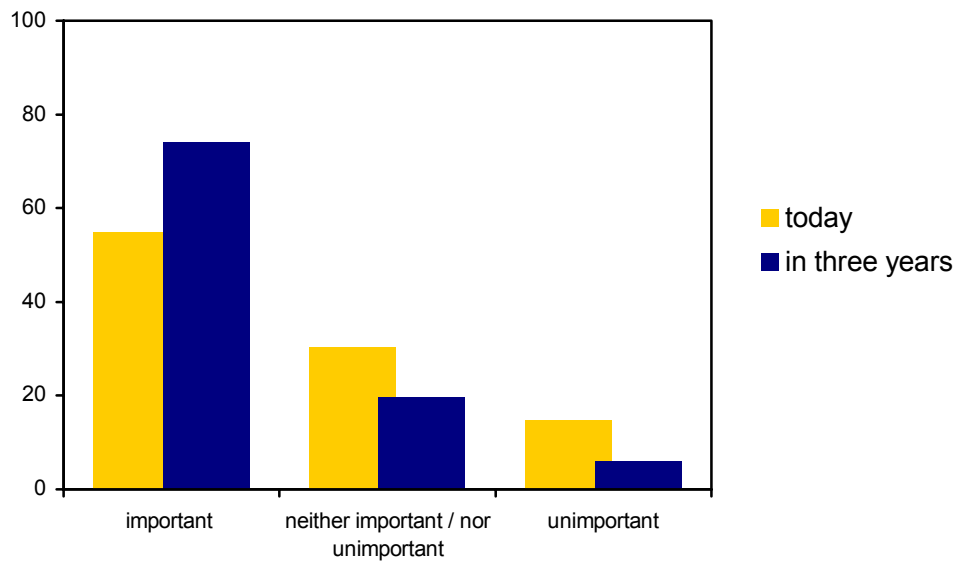


Fig 3.5.4: Equal opportunities for migrants in training and employment are

		Percentage
N=120	important	35,3
	neither important / nor unimportant	39,5
	unimportant	25,2
	Total	100,0

Tab 3.5.51: Today the use of the employment and qualification potential of older people is

		Percentage
N=120	important	68,1
	neither important / nor unimportant	21,8
	unimportant	10,1
	Total	100,0

Tab 3.5.52: In three years the use of the employment and qualification potential of older people will be

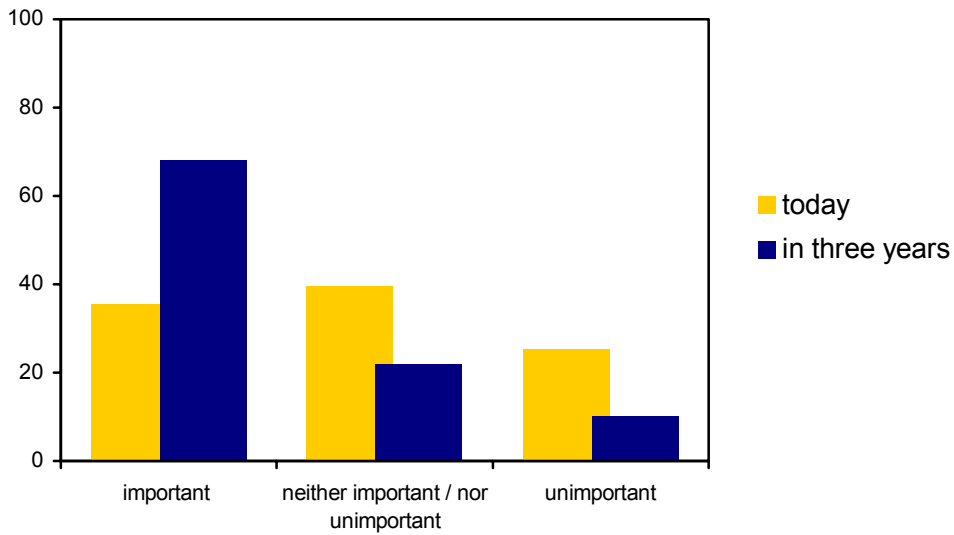


Fig 3.5.5: The use of the employment and qualification potential of older people is

Section 6: Specific professional learning tasks

		Percentage
N=120	important	65,8
	neither important / nor unimportant	23,7
	unimportant	10,5
	Total	100,0

Tab 3.6.11: Today the management of staff in the area of professional training is

		Percentage
N=120	important	84,8
	neither important / nor unimportant	11,6
	unimportant	3,6
	Total	100,0

Tab 3.6.12: In three years the management of staff in the area of professional training will be

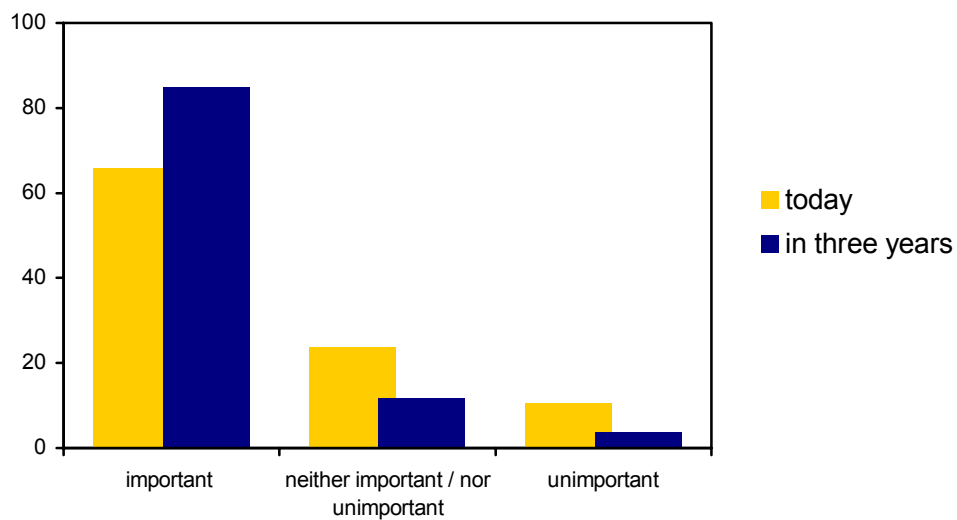


Fig 3.6.1: The management of staff in the area of professional training is

		Percentage
N=120	important	58,9
	neither important / nor unimportant	29,9
	unimportant	11,2
	Total	100,0

Tab 3.6.21: Today topics of Marketing & Distribution in the area of professional training are

		Percentage
N=120	important	82,4
	neither important / nor unimportant	13,0
	unimportant	4,6
	Total	100,0

Tab 3.6.22: In three years topics of Marketing & Distribution in the area of professional training will be

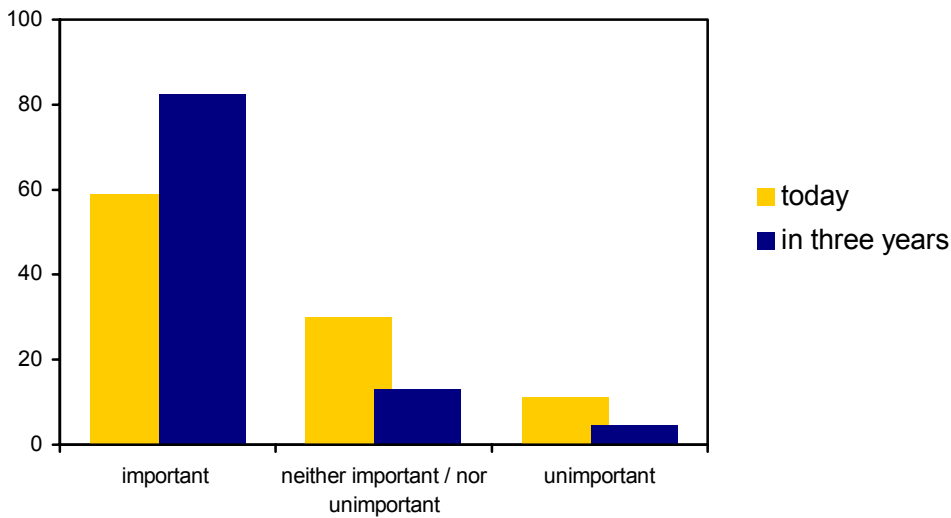


Fig 3.6.2: Topics of Marketing & Distribution in the area of professional training are

		Percentage
N=120	important	68,8
	neither important / nor unimportant	22,3
	unimportant	8,9
	Total	100,0

Tab 3.6.31: Today communication tasks in the area of professional training are

		Percentage
N=120	important	89,1
	neither important / nor unimportant	8,2
	unimportant	2,7
	Total	100,0

Tab 3.6.32: In three years communication tasks in the area of professional training will be

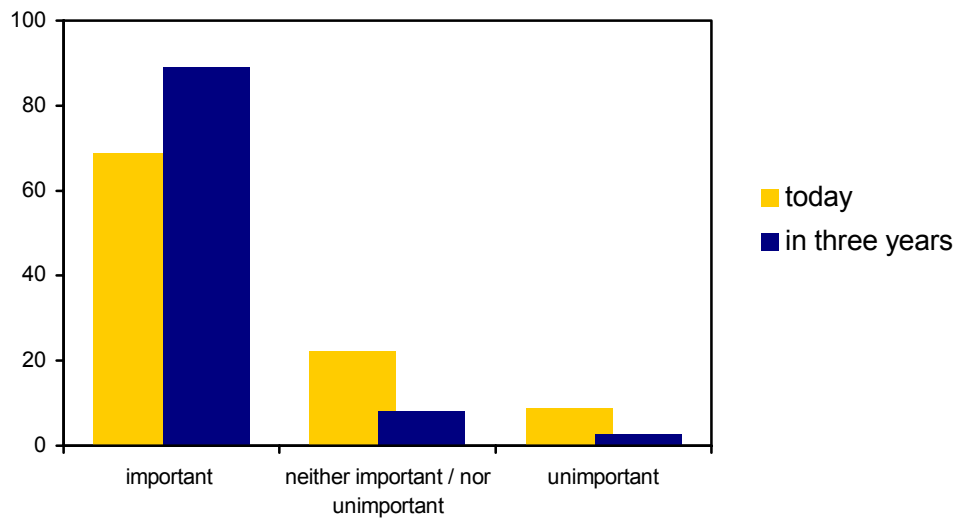


Fig 3.6.3: Communication tasks in the area of professional training are

		Percentage
N=120	important	62,2
	neither important / nor unimportant	25,2
	unimportant	12,6
	Total	100,0

Tab 3.6.41: Today quality management in the area of professional training is

		Percentage
N=120	important	88,9
	neither important / nor unimportant	8,3
	unimportant	2,8
	Total	100,0

Tab 3.6.42: In three years quality management in the area of professional training will be

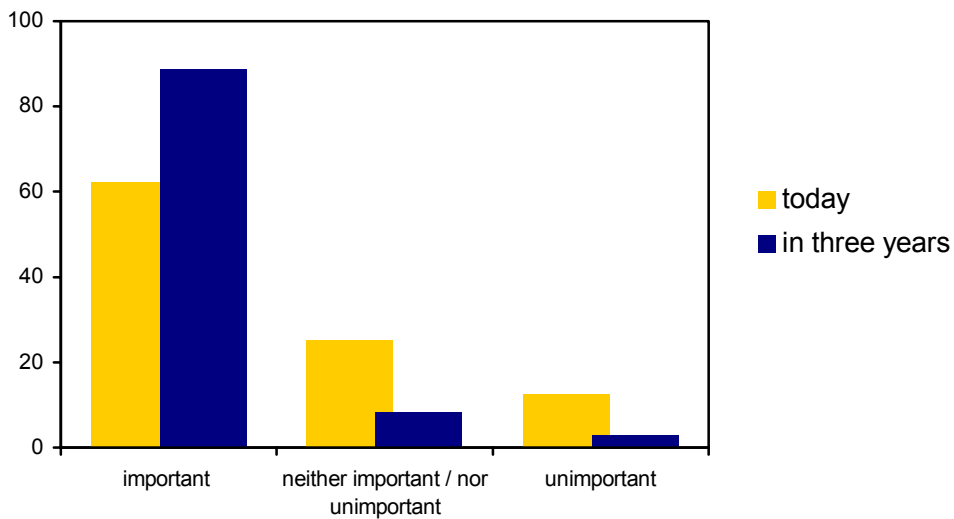


Fig 3.6.4: Quality management in the area of professional training is

		Percentage
N=120	important	55,4
	neither important / nor unimportant	29,5
	unimportant	15,2
	Total	100,0

Tab 3.6.42: In three years quality management in the area of professional training will be

		Percentage
N=120	important	78,0
	neither important / nor unimportant	18,3
	unimportant	3,7
	Total	100,0

Tab 3.6.52: In three years product management in the area of professional training will be

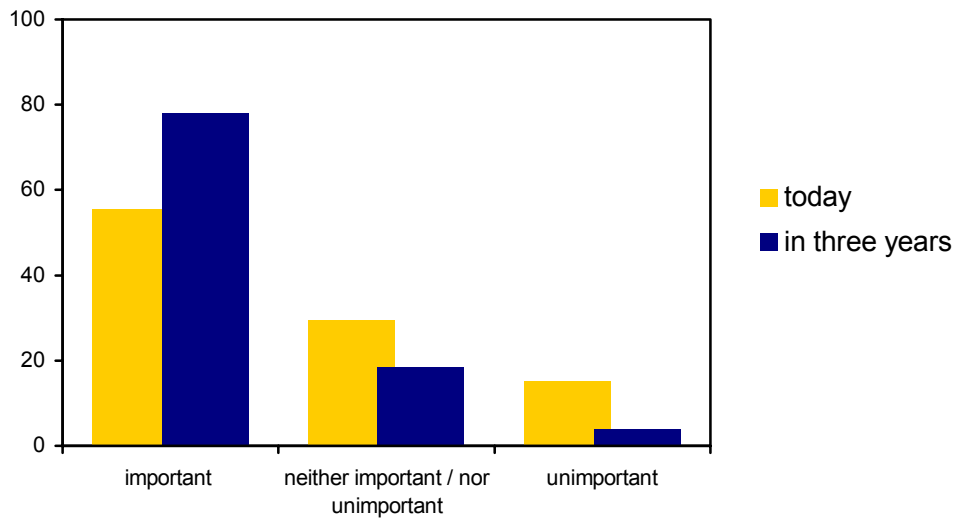


Fig 3.6.5: Product management in the area of professional training is

		Percentage
N=120	important	65,8
	neither important / nor unimportant	24,3
	unimportant	9,9
	Total	100,0

Tab 3.6.61: Today cost management in the area of professional training is

		Percentage
N=120	important	82,6
	neither important / nor unimportant	13,8
	unimportant	3,7
	Total	100,0

Tab 3.6.62: In three years cost management in the area of professional training will be

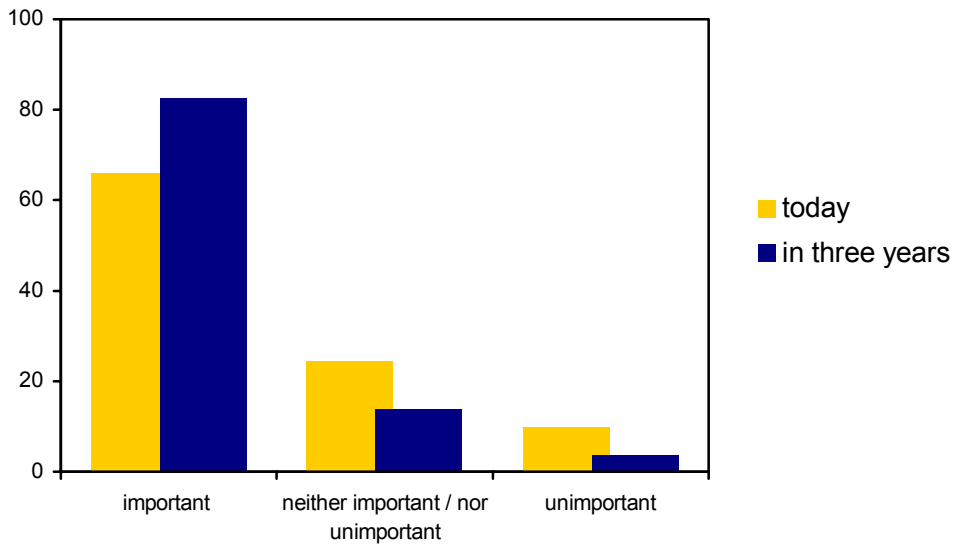


Fig 3.6.6: Cost management in the area of professional training is

		Percentage
N=120	important	68,8
	neither important / nor unimportant	23,9
	unimportant	7,3
	Total	100,0

Tab 3.6.71: Today human resource Management in the area of professional training is

		Percentage
N=120	important	86,0
	neither important / nor unimportant	10,3
	unimportant	3,7
	Total	100,0

Tab 3.6.72: In three years human resource Management in the area of professional training will be

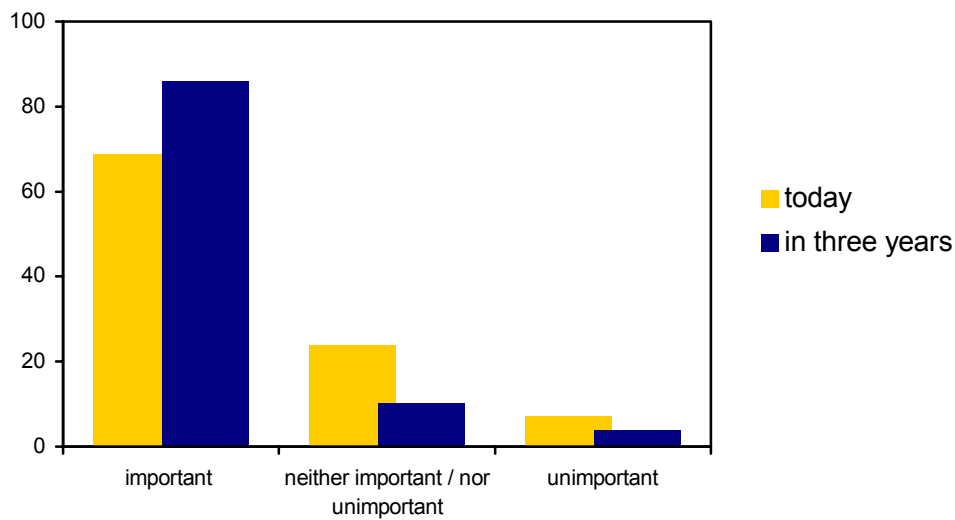


Fig 3.6.7: Human resource Management in the area of professional training is

		Percentage
N=120	important	49,5
	neither important / nor unimportant	33,0
	unimportant	17,4
	Total	100,0

Tab 3.6.81: Today environment protection questions are

		Percentage
N=120	important	72,7
	neither important / nor unimportant	18,2
	unimportant	9,1
	Total	100,0

Tab 3.6.82: In three years environment protection questions will be

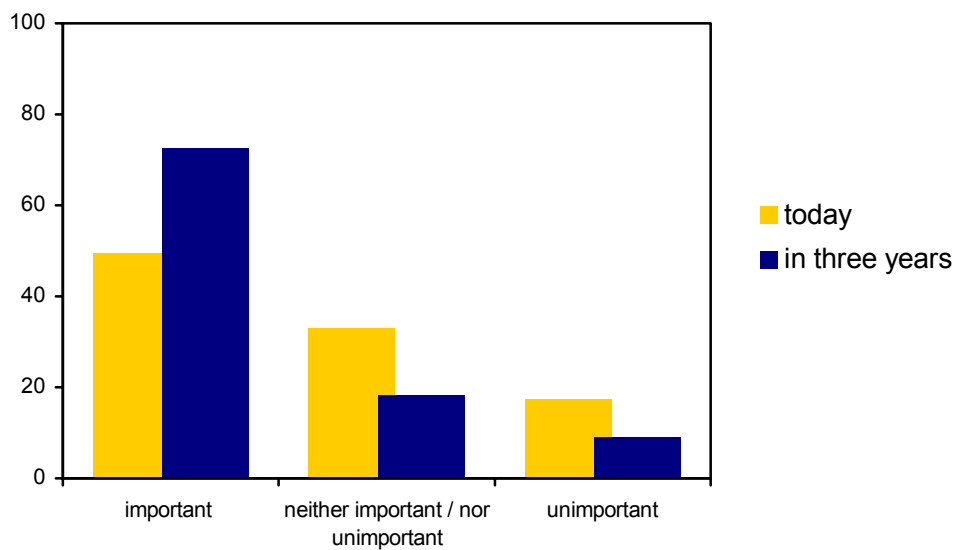


Fig 3.6.8: Environment protection questions are

		Percentage
N=120	important	62,2
	neither important / nor unimportant	28,8
	unimportant	9,0
	Total	100,0

Tab 3.6.91: Today train the trainer tasks are

		Percentage
N=120	important	82,0
	neither important / nor unimportant	11,7
	unimportant	6,3
	Total	100,0

Tab 3.6.92: In three years train the trainer tasks will be

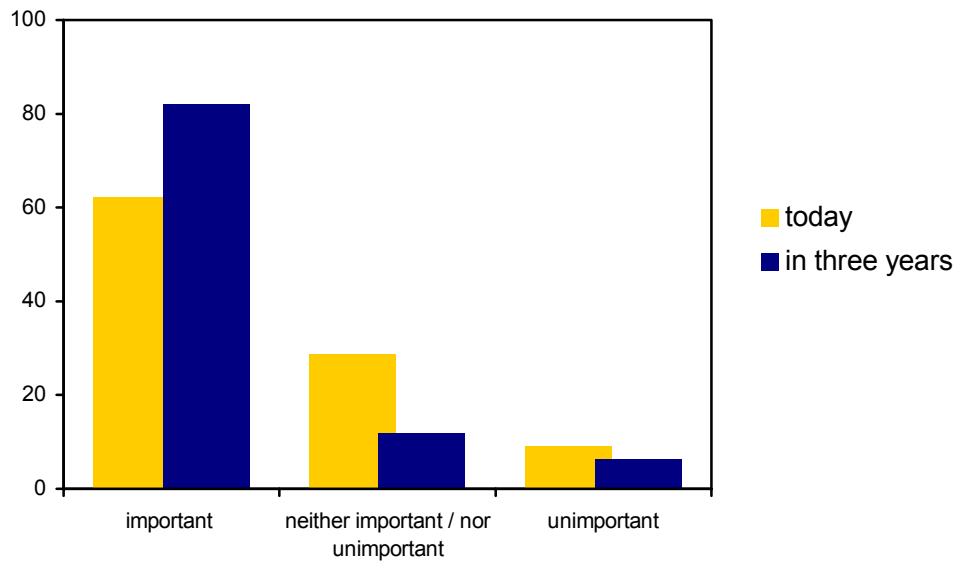


Fig 3.6.9: Train the trainer tasks are

		Percentage
N=120	important	65,2
	neither important / nor unimportant	22,6
	unimportant	12,2
	Total	100,0

Tab 3.6.101: Today languages and intercultural training is

		Percentage
N=120	important	83,2
	neither important / nor unimportant	10,6
	unimportant	6,2
	Total	100,0

Tab 3.6.102: In three years languages and intercultural training will be

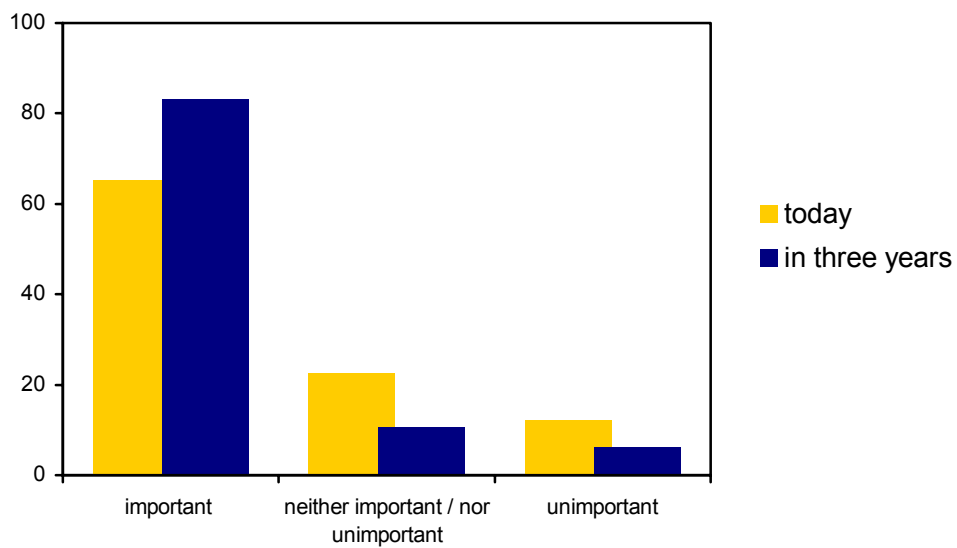


Fig 3.6.10: Languages and intercultural training is

		Percentage
N=120	important	80,9
	neither important / nor unimportant	12,2
	unimportant	7,0
	Total	100,0

Tab 3.6.111: Today computer application training is

		Percentage
N=120	important	73,7
	neither important / nor unimportant	19,3
	unimportant	7,0
	Total	100,0

Tab 3.6.112: In three years computer application training will be

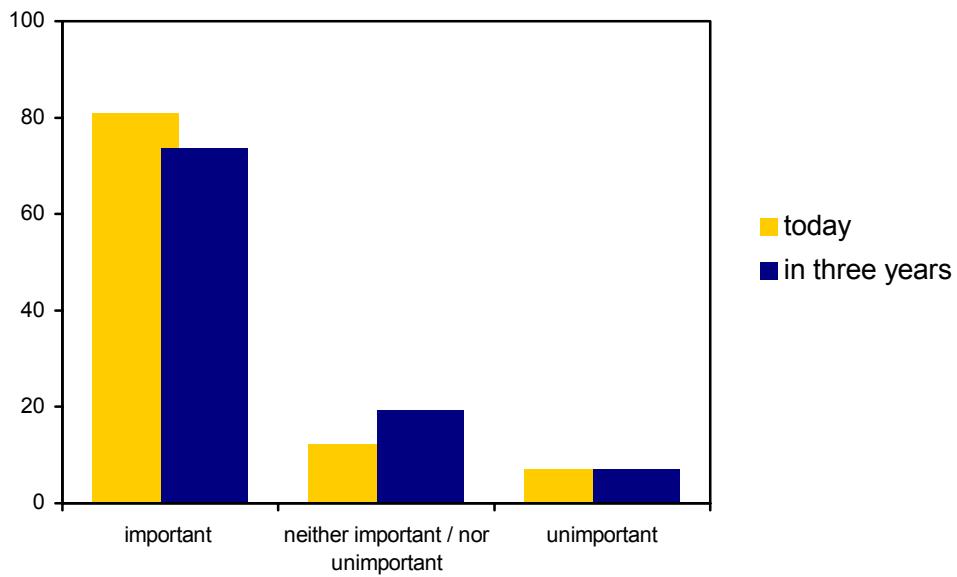


Fig 3.6.11: Computer application training is

		Percentage
N=120	important	44,1
	neither important / nor unimportant	40,5
	unimportant	15,3
	Total	100,0

Tab 3.6.121: Today corporate culture in the area of professional training is

		Percentage
N=120	important	70,6
	neither important / nor unimportant	20,2
	unimportant	9,2
	Total	100,0

Tab 3.6.122: In three years corporate culture in the area of professional training will be

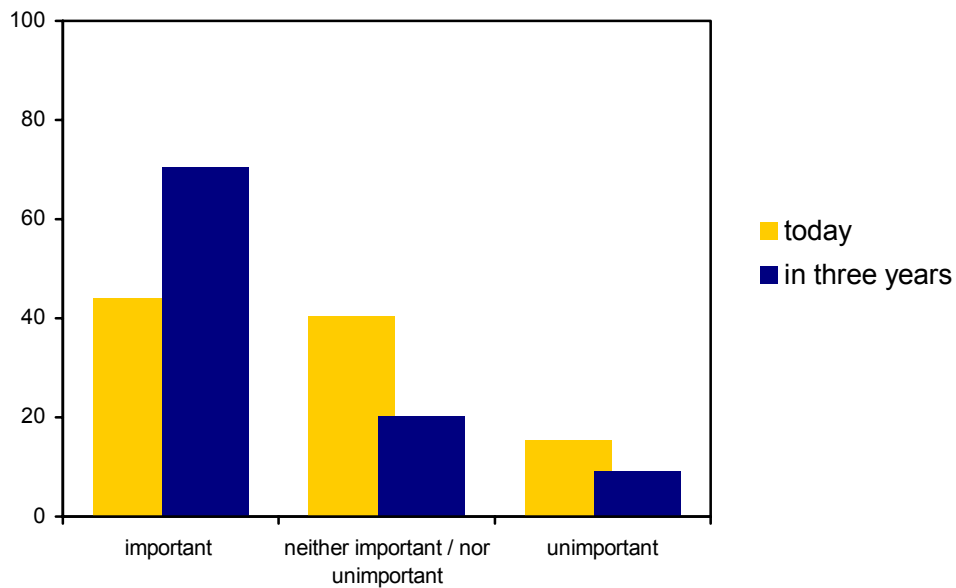


Fig 3.6.12: Corporate culture in the area of professional training is

		Percentage
N=120	important	45,9
	neither important / nor unimportant	36,0
	unimportant	18,0
	Total	100,0

Tab 3.6.131: Today office organisation training is

		Percentage
N=120	important	54,1
	neither important / nor unimportant	36,7
	unimportant	9,2
	Total	100,0

Tab 3.6.132: In three years office organisation training will be

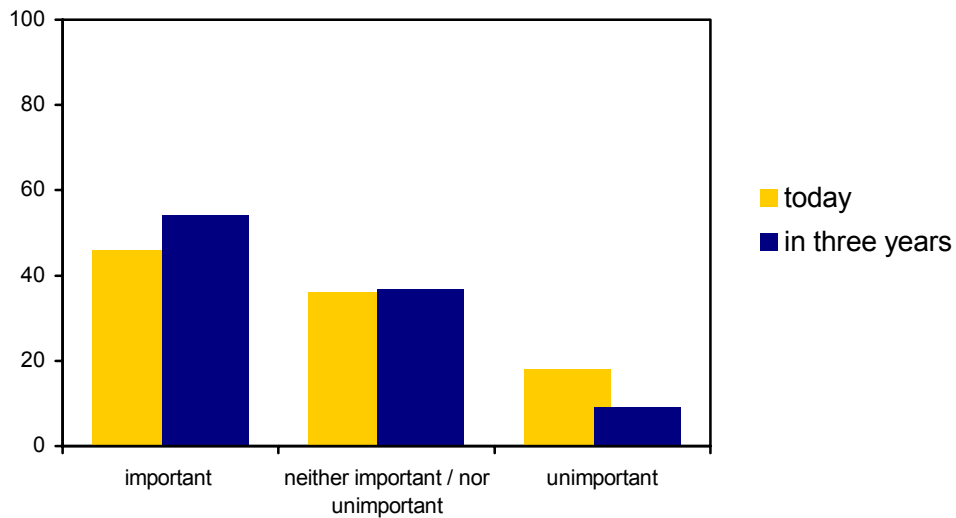


Fig 3.6.13: Office organisation training is

		Percentage
N=120	important	39,4
	neither important / nor unimportant	36,5
	unimportant	24,0
	Total	100,0

Tab 3.6.141: Today training in the thematic area of Law is

		Percentage
N=120	important	54,3
	neither important / nor unimportant	34,3
	unimportant	11,4
	Total	100,0

Tab 3.6.142: In three years training in the thematic area of Law will be

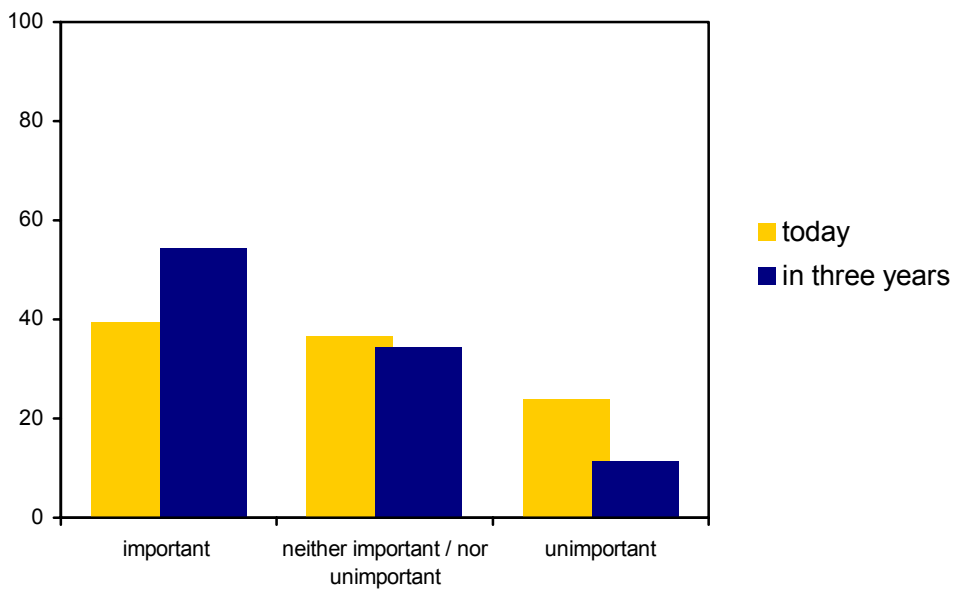


Fig 3.6.14: Training in the thematic area of Law is