



QUALITY MANAGEMENT SYSTEMS FOR VOCATIONAL EDUCATION AND TRAINING

Integration of Learning Outcomes
into Quality Management and
Harmonisation of Quality Standards
in Vocational Education and
Training in Europe

TOOLKIT



TABLE OF CONTENTS

INTRODUCTION	2
EXAMINATION SYSTEM (AVENTUS, NL)	8
LEVEL 1 STUDENT GUIDANCE SYSTEM (BBS-SYKE, DE)	15
STUDENT GUIDANCE SYSTEM (WEST LOTHIAN COLLEGE, UK)	21
INTEGRATION OF MICRO:BIT EDUCATION SYSTEM (ATEC, PT).....	30
INTEGRATION OF THE GERMAN IHK EXAMINATION (ATEC, PT)	36
INDIVIDUAL AND FLEXIBLE PATHWAYS IN VET (KAINUUN AMMATTIOPISTO, FI).....	42
BLENDED LEARNING SYSTEMS IN VET (BIT, AT)	50

INTRODUCTION

This toolkit is the Intellectual Output of the Erasmus+ QMS4VET Project (2018-1-NL01-KA202-038886) and is the collection of the work developed during six Project Weeks, organised by the QMS4VET Consortium:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungcenter (www.bitschulungcenter.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

The toolkit offers a step-by-step approach for implementation of the best practices related to integrating learning outcomes into quality management topics with regards to student guidance, learning and examination for VET providers.

More detailed background information about the QMS4VET project can be found at <https://www.ventus.nl/qms4vet>



BACKGROUND

Many improvements, developments and recommendations have been implemented at European and national levels regarding quality assurance and the learning outcomes approach and further developments are needed to improve transparency and comparability of qualifications to support coherent credit systems. However, less attention has been given to the operational level where the action really takes place: the VET providers level.

A partnership of six VET organizations was created to develop the project **QMS4VET - Integration of Learning Outcomes into Quality Management and Harmonization of Quality Standards in Vocational Education and Training in Europe**, a project to share, compare and evaluate practices implemented within each quality management system with regard to either guidance, education or examination, and provide the needed support for its practical implementation and to further integrate the learning outcomes (ECVET approach) as part of the quality assurance systems.

Although representing a wide variety of European regions, all partners are focused on improving quality in their organizations in order to deliver the best possible education, but all using different approaches. During the project period (September 2018 – March 2021), each of the five partners will organize a project week in order to study how their own quality approaches work in practice.

This document is the project main output - the Quality Management Toolkit – developed to provide step-by-step practical recommendations to enable the implementation of best practices into different quality management topics for VET providers. The intention is to bridge the gap between more theoretical level of quality management in general and the real life circumstances of day to day reality. It's expected that this Toolkit will guide readers to implement best practice examples into their own organizations, enhancing transparency and quality improvement, building trust for the sustainability of network and improving the ECVET approach.

PROJECT PARTNERS

This project is an European investigation regarding quality assurance best practices. Thus, partners are from different parts of Europe (North, Central and South). Also, the partnership as a whole aggregate the necessary competences and motivation to do this investigation.

Aventus

De school waar jij 't maakt

bit group

atec

KAINUUN AMMATTIOPISTO

BBS Syke
Europaschule

west lothian college



Aventus is a regional college for secondary vocational education and training with locations in 3 cities: Apeldoorn, Deventer and Zutphen (Netherlands). The college counts approx. 980 employees and 10,500 students. It consists of 5 departments: Business & Trade, Technology & Mobile, Health care & Welfare, Training & General Adult Education and Creative Industries. Aventus is certified by ISO 9001:2015 and has over 10 years' experience in learning outcomes approach and validation.

ATEC – Associação de Formação para a Indústria is a Portuguese nonprofit private association, established on 30th of December 2003, with the promoters and founding members, Volkswagen Autoeuropa, Siemens, Bosch and CCILA (or AHK - Portuguese - German Chamber of Commerce and Industry). ATEC has a quality management system certified by ISO 9001 and by the Portuguese training providers' certification standards since 2004. Additionally, has substantial experience in product specific quality assurance tools by guaranteeing external verification in some of its training courses.

“BBS SYKE EUROPASCHULE” is a vocational training centre in Germany which educates about 3,000 students in a various number of professions for social care, trade, industry, commercial and administrative activities, body care, food and home economy. The school also offers higher education entrance qualification. BBS Syke has subscribed to the European Foundation for Quality Management (EFQM) in 2006 and is also ISO certified since 2014. It has been accredited as the best EUROPASCHULE in Lower Saxony and works with learning outcomes and ECVET for many years.

bit (= best in training) schulungcenter (= training center), founded in 1986, is one of the leading adult education providers in the area of vocational education, training and employability in Austria. bit group is certified according to ISO 9001 since 2007. In addition, bit schulungcenter holds since 2012 the Ö-Cert (quality certificate for adult education issued by the Austrian Ministry of Education). Furthermore, have substantial experience in implementing & monitoring projects for the Public Employment Service Vienna according to EFQM.



West Lothian College is an award-winning provider of further education based in Livingston, West Lothian, Scotland since 2001. It is the only mainstream college in the local authority area which has a population of over 171,000. The College currently has over 6,000 students, full time, part time and those who attend to complete part of their coursework related to employer certificated training. West Lothian College subscribes to the European Foundation for Quality Management (EFQM) and is currently awarded four stars on its framework related to the quality of its work. Additionally, has internal quality procedures which adhere to the requirements of the awarding bodies it subscribes to for its learners. Quality of staff relations is overseen through the Investors in People Award, which the College currently holds.

Kainuu Vocational College (KAO) provides vocational training for young people and adults in Social and Health Care, Culture, Business and Administration, Nature and Land Based Industries, Tourism and Catering and Technology and Logistics. Kainuu Vocational College operates mainly in Kainuu and Kuusamo regions in Finland and has a unit in Vantaa near Helsinki. Kainuu Vocational College is a municipality enterprise owned by the city of Kajaani. Kainuun Ammattiopisto has a Quality System based on ISO 9001 and was rewarded in November 2014 with Vocational Education and Training (VET) Quality Award given by Finnish National Board of Education, for the third time.

METHODOLOGY

The methodology applied is a jointly development of the project, based on five Projects Weeks (one at each partner).

During the Project Weeks an average of three specialists from each partner had the opportunity to see, discuss and document how each partner is dealing with the integration of learning outcomes into the following different quality topic(s):



Includes all practices related to the execution of the learning process, inside the classroom or at on-job training, for instance: methods, strategies, specific resources, specific teachers/trainers' skills needs and development, etc.



Stands for all kind of support practices, such as psychological, social, financial, or work guidance during the learning process.



Refers to all practices related to guaranteeing that learning outcomes are assessed.

Project Weeks had the following structure:

- Monday > arrival, get together and preparatory meeting, so everybody get to know each other and knows exactly the program for the week
- Tuesday > job shadowing focusing on the practices of the host partner regarding the selected quality topic(s)
- Wednesday > job shadowing focusing in evaluating the practices presented, using the SWOT analysis tool
- Thursday > document the evaluated practices, including (i) Objectives, (ii) Methodology used, (iii) SWOT analysis, (iv) Recommendation for step by step implementation, and (v) Evaluation.
- Friday > departure

The central tool used during the project weeks is the SWOT analysis, where specialists from each partner can focus on the strengths, weaknesses, opportunities, threats of each practice presented by partners. This information is immediately discussed with the host specialists to guarantee the more accurate information possible to be included in the project week reports.

The information of the SWOT analysis is then used as an important input for the recommendation for the step by step implementation, by identifying the strengths that makes the practice a real best practice, but also using the weaknesses as alert points to have in consideration when the implementation is in place.

The external analysis is also a strong tool to use as it gives information that can be decisive for making a final decision on how and when to implement it.

PROJECT WEEKS

During the six Project Weeks developed under the life time of the project the following practices were analysed for each quality topic:



- Integration of Microbit into ATEC's level 4 qualifications.
- Kainuun ammattiopisto individual learning process.
- Bit's Blended Learning Settings in VET



- BBS Syke methodology to attract students with previous dropout history and to keep them in the system.
- West Lothian College integrated system of support and intervention.



- BBS Syke methodology to attract students with previous dropout history and to keep them in the system.
- West Lothian College integrated system of support and intervention.
- Aventus examination process.
- External certification of competences (AHK example) applied by ATEC.

PROJECT WEEK INTRODUCTION VIDEOS

With the links provided in the table below, you can view short videos developed by each project partner about the project week conducted in their organization in which they worked with participants to explore their best practices related to integrating learning outcomes into quality management related to guidance, learning, and examination for VET providers.

<p>Aventus examination process</p>		<p>https://youtu.be/tkYKWf2oFmQQR</p>
<p>BBS Syke methodology to attract students with previous dropout history and to keep them in the system</p>		<p>https://youtu.be/vM8ogCKHCxs</p>
<p>West Lothian College integrated system of support and intervention</p>		<p>https://youtu.be/OcdStVXMd68</p>
<p>Integration of Microbit into ATEC's level 4 qualifications.</p> <p>External certification of competences (AHK example) applied by ATEC.</p>		<p>https://youtu.be/B4HDI3_oZcs</p>



QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe

Kainuun ammattopisto individual learning process.



The project week in January 2020.

- The theme of the project week was "Individual and flexible study paths in vocational education".
- Finnish vocational education has been reformed during last few years.
- Occupations and jobs are changing rapidly, and qualifications must have a direct link to working life.
- Individual study paths are needed to achieve competence.
- Completion of a qualification is not based on time but on skills and competence.



<https://youtu.be/o-pussblcf4>

bit schulungcenter Blended Learning Settings in VET



bitschulungcenter
member of bit group
Laura Reutler



https://youtu.be/E_OUGkOELnA

PROJECT WEEK REPORTS

Project Week reports are all organized following the same structure with six different chapters:

1. INTRODUCTION

The introduction identifies the working team, dates of the project week, agenda and other general information, as well as a brief description of the partner's activity and Quality Management System under analysis.

2. OBJECTIVES

In this chapter the objectives set for the best practice(s) within partners' Quality Management System are identified, and the relation to one of the quality topics Learning, Guidance, and Examination is set.

3. METHODOLOGY

The chapter Methodology refers to the description of the best practice(s) approach on the quality management topic(s) with emphasis to advantages, struggles and strategies to overcome obstacles. It also identifies the main methods used, responsibilities and any necessary resources (human, infrastructure, knowledge, money, etc).

4. SWOT ANALYSIS

Is the result of the SWOT analysis undertaken during the Project Week and its main findings, including the way the best practice(s) contribute to the ECVET Learning Outcomes approach.

5. RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION

This chapter includes gives the reader some important suggestions when implementing the necessary steps of the best practice(s) and its relation to the Quality Management System.

6. EVALUATION

Final conclusions about the best practice(s) analysed, focusing on the main advantages and disadvantages identified in the SWOT analysis.



QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe



PROJECT WEEK REPORT

1st Project week (21 – 25 January 2019, Apeldoorn, NL)

Aventus

De school waar jij 't maakt

ABSTRACT

The human factor very easily creates inequality during the examination process resulting in frustration and non-representative results. Aventus developed a methodology to minimise the human factor and increase quality and satisfaction of all stakeholders.

QUALITY CATEGORY

- Guidance
- Learning
- Examination

QMS4VET Consortium

The partners within the QMS4VET project are:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungcenter (www.bitschulungcenter.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

INTRODUCTION

Aventus is the Dutch VET organisation with locations in Apeldoorn, Deventer and Zutphen. They offer VET courses and education for all relevant professions from EQF level 1 to 4. Aventus organises their examination process with focus on fair outcomes representing the required knowledge, skills and competences relevant for each profession.

During the first QMS4VET project week Aventus presented their quality management system followed by their case study (see Annex 1 for the agenda). All participants discussed the presented methodology based on ECVET standards, resulting in a detailed SWOT analysis and step-by-step recommendation for implementation. In order to make allowance for the differing degrees of flexibility within national educational frameworks the recommendations focus on aspects that are useful for any interested organisation.

For more information about the QMS4VET project and other project week reports see <https://www.ventus.nl/qms4vet>



OBJECTIVES

The following objectives were set for best practice with respect to the Aventus examination approach.

Ensure:

1. that the examination takes place in the context of realistic working conditions;
2. independent and competent judgement during the examination;
3. equal conditions for each candidate during their examinations;
4. that examination is separated from the educational programme.

METHODOLOGY

The goal of the Aventus examination methodology is to let the candidate prove that he/she masters the knowledge, skills and competences as described in the applicable qualification specification and in line with the ECVET approach. In order to ensure this, the following objectives have to be met:

- 1. Ensure that the examination takes place in the context of realistic working conditions**

In the context of the Aventus approach this will ideally take place in real working conditions during internship or apprenticeship. This means that during examination an independent and qualified assessor visits the workplace, using the official examination documents which are based on the ECVET standards (knowledge, skills and competences).

2. Ensure independent and competent judgement during the examination

The assessor and candidate should not have a direct teaching or personal relationship with each other.

3. Ensure equal conditions for each candidate during their examinations

Equality of preparation, implementation (including duration and place) and evaluation of the examination should be available for all candidates and assessors.

4. Ensure that examination is separated from the educational programme


The examination will take place when the individual learning process has been completed and after a clear decision to proceed has been taken by the relevant stakeholders.

For further information: Annex 2 (Aventus presentations).



SWOT ANALYSIS

The following analyses the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the Aventus case study.

Strengths	Weaknesses
<ul style="list-style-type: none"> • The possibilities of using a digital programme in preparation suits the individual needs of the candidates • The candidate can take the exam when they are ready i.e. flexible time for exams when it is outsourced to an external company • Equal conditions for each candidate • The four-eyes principle is adopted (plus recording) • There is a strong quality circle • Structure of exams is nationally consistent • There is a thorough check of candidate's required skills and competencies • All exam conditions create 'real' workplace conditions • Commission of Examinations Board provides multiple levels of approval for the whole course and candidates know who to approach to challenge • Assessors have to be certified • Teachers are unable to assess their own candidates • Strong relationships with companies; this ensures companies feel valued too. • Process is very well documented – fully transparent 	<ul style="list-style-type: none"> • Uses a significant amount of resources and paper work • Creates pressure due to there being a requirement for a separate exam. Failing the exam means failing the diploma • High failure rate – are all markers following the guidance consistently? • There is a lack of trust from Government which can result in too many checks • Limited individual adjustments for special/additional needs • Timing of in-house exams is not flexible to the individual candidate • Often the assessor is also the teacher, which should not be the case. 
Opportunities	Threats
<ul style="list-style-type: none"> • Even more opportunities to have better relationships with other companies • Use fewer simulations and more 'real practice' examinations • Make the internal exams more flexible (time flexibility to the individual) • Use digitalisation and other new technologies (augmented reality) to make the system less bureaucratic. • Consider if 2 teachers are always necessary at every examination • Clear communication about how often candidates can take part in examinations • Buying exams takes a lot of work off the shoulders of teachers – no preparation or marking • More cooperation between schools i.e. using foundations • Create Dutch/European Stamp of Quality for other countries to recognise high quality of candidates 	<ul style="list-style-type: none"> • Lack of objectivity • Separate from the educational programme – organisational difficulties, bigger exams (big groups), does not always meet the needs of the candidates • Same standards on all levels/all sectors/all education (in such a big organisation) • Differences in thinking about quality in educational teams and quality management • Profit orientation of companies that sell exams could lead to inequalities • Relationship with Government causes anxiety and mistrust • Dependency on partner exam organisation (external) i.e. fire, bankruptcy • Requires disciplined attitude of staff

Reflection and awareness on possible weaknesses and threats

In the preceding SWOT analysis an overview was given of the Strengths, Weaknesses, Opportunities and Threats of the Aventus examination system. In the following section, the strengths and opportunities are integrated in a Step-By-Step Implementation plan which can be used in implementing all or parts of the system. However, in doing so, it is important to be aware of the weaknesses and threats Aventus is facing in the used examination system. Therefore, in the following paragraph a reflection can be found on the main and most important potential weaknesses and threats based on the results of the SWOT-analysis. This reflection serves to balance the potential strengths and weaknesses and should be taken into account when implementing all or part of the Aventus examination system.

1. The high quantity of resources required: it is recommended that users should be aware of the amount of resources (for example, budget, staff and/or time) necessary for successful implementation of this methodology
2. The timing of in-house exams: due to organisational difficulties, it appears that exams cannot always be carried out flexibly throughout the year for each individual candidate. As a result, some exams are carried out in a group. This might increase pressure for candidates since they cannot follow the timing of their own individual learning process which therefore increase their chance of failing an exam
3. Assessment of exams: this is always subjective and therefore there is always a risk of the human factor influencing the results of the exam
4. Limited individual adjustments available for candidates with special/additional needs during examination: ensure beforehand that the candidate has the ability to meet the occupational requirements
5. The quality of examination in educational teams: to ensure the implementation of the examination takes place as intended, a strong quality culture has to be present or developed in the educational teams
6. Conflicting interests: the main priority of a profit oriented company may be to perform the examination against low costs, for example, whereas the main interest of the educational/training organisation is to perform a high quality examination. To overcome this threat a recommendation is to visit the examination company regularly and carry out quality checks of the examination process.



RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION

The following recommendations can be used when implementation of parts of the Aventus examination system is considered.

Context of a realistic working condition:

- Educational/training organisations should develop a strong network of external partners;
- Exams should be developed in collaboration with external partners;
- Exams should, if possible, be carried out in a real working environment, or simulated in collaboration with external partners;
- The exam environment and materials used, including equipment, tools and documentation, should be as close as possible to a realistic working environment;
- Where role play is used to carry out a simulated exam, actors involved in the role play should have experience in the area of work relevant to the exam;
- The duration of the exam should reflect the actual duration of the real working tasks which are being tested in the exam.

Independent and competent judgement:

- Exam assessors should be appropriately qualified to assess according to the standards set by the educational/training organisation;
- Exam assessors should be subject experts in the area relevant to the exam;
- To maintain the integrity of the exam teachers and/or colleagues who have recently or directly taught/worked with the learner should not also assess the learner;
- To ensure consistency of assessment, all learners undertaking the exam should have prior access to the criteria document and be issued with the same exam material;
- If possible, the independence of the assessment should be ensured by using two assessors (four-eyes principle). Otherwise, independence should be ensured using other methods (e.g. recording an oral exam).

Equal conditions for each candidate/learner:

- Information and preparation materials regarding exam conditions and requirements should be freely available to all learners in a number of different formats to allow equal opportunity in preparing for the exam and in order to meet the learners' individual learning needs;
- All external assessors who are briefing learners on exam conditions and requirements should be issued with accurate step by step instructions to ensure consistency and clarity;
- Where role play is used to carry out a simulated exam, all actors involved in the exam should receive the same briefing documentation and/or oral instructions to ensure consistency of interaction with learners;
- All external partners should be familiar with and utilise the same defined quality standards in carrying out exams to ensure consistency and equality for every learner.

Separate from the educational programme:

- Ensure that learners have completed all required aspects of their individual education programme before permitting them to take the exam;
- Ensure that learners have the opportunity to take exams flexibly throughout the academic year in order to take into account the individual education process and abilities of all learners.

EVALUATION

After analysing the Aventus examination system the following conclusions can be drawn:

Advantages:

The examination is according to the ECVET approach (knowledge, skills and competences) with a strong focus on testing in real life situations/daily business. A high quality assessment is guaranteed since the assessors, are proven competent in judging assessments, work in teams and do not have any relationship with or connection to the candidate. Outsourcing of the examination makes the previous advantages achievable and works very cost and time efficient.



Disadvantages:

Although the presented examination system is very thorough, it is also bureaucratic because of the many documents involved which makes it (together with the requirements for independent assessment) labour intensive and therefore expensive.

Tips for implementation:

Because of the many requirements to guarantee a high quality examination many stakeholders are involved resulting in a long implementation period with step by step improvements.

ANNEXES

1. Agenda and Minutes 1st QMS4VET project week
2. Aventus presentations



QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe



PROJECT WEEK REPORT

1st Project week (21 – 25 January 2019, Apeldoorn, NL)



ABSTRACT

Students with a previous dropout history have been identified as the most difficult target group to keep in the educational system and obtain a relevant diploma for entering the labour market. BBS Syke EUROPASCHULE developed a methodology to attract this target group, to keep them in the system and increase the percentage of certified potential future apprentices. [QMS4VET](#)

Consortium

- Guidance
- Learning
- Examination

QMS4VET Consortium

The partners within the QMS4VET project are:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungscenter (www.bitschulungscenter.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

INTRODUCTION

BBS Syke EUROPASCHULE is a VET college in the Diepholz district in Lower Saxony, Germany and the offer VET and A-level courses and educations for all relevant professions from EQF level 1 to 6. BBS Syke EUROPASCHULE organises level 1 education including an intensive guidance system preventing potential school dropout and get dropouts back in de educational system in order to prepare them for the labour market. Students who acquire the envisaged certificate (Hauptschulabschluss) have the mandatory qualification for being accepted as apprentices by the German dual education system.

During the first QMS4VET project week (see Annex 1 for the agenda) BBS Syke EUROPASCHULE presented their quality management system followed by their case study. To be mentioned is that an essential feature of the studied guidance methodology is the focus on knowledge, skills and competences in line with the ECVET approach.

All participants discussed the presented methodology resulting in a detailed SWOT analysis and step-by-step recommendation for implementation. The recommendations try to disregard national specialities and focus on aspects that are useful for any interested organisation.

See for more information about the QMS4VET project and other project week reports.

<https://www.ventus.nl/qms4vet>



OBJECTIVES

The following objectives were set for the best practices with respect to the BBS Syke EUROPASCHULE guidance approach:

Ensure

1. that the number of own school dropouts and the number of certified learners increase significantly;
2. that the number of apprenticeship starters increase significantly;
3. that the satisfaction ratio of learners and teachers increase significantly.

METHODOLOGY

The goal of the BBS Syke EUROPASCHULE guidance methodology is to minimise school dropout and prepare more youngsters for the German labour market which will give them better chances for successfully taking part in the present and future society. In order to ensure this, the following objectives have to be met:

1. Ensure that the number of own school dropouts and the number of certified learners increase significantly

The BBS Syke EUROPASCHULE approach offers the targeted students an alternative and more individual approach in didactics, close psychological and social guidance. Moreover the didactical approach focusses on real life assignments of working life taking the required knowledge, skills and competences (ECVET standards) as essential teaching and guidance criteria including routines and rituals and a general holistic approach.

2. Ensure that the number of apprenticeship starters increase significantly

Students who successfully finish the BBS Syke EUROPASCHULE approach (production classes) gain the envisaged certificate (Hauptschulabschluss), representing the mandatory qualification for being accepted as apprentices by the German dual education system.

3. Ensure that the satisfaction ratio of learners and teachers increase significantly

A periodic online anonymous satisfaction survey is held every year amongst the involved students and every second year amongst the involved teachers, resulting in action plans for the lowest rated subjects.

For further information: Annex 4 (BBS Syke presentations).

SWOT ANALYSIS

The following analyses the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the BB Syke case study.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Engagement with students/parents and companies • Students get to choose (top 3) • Chance to experience success • Opportunity to experience in a real life environment • Valued by the Principal by being rewarded for their jobs • Student evaluation systems • Funds for small groups • Maximum 4 teachers per class • Recognised competencies to access dual system • A range of courses including bakery, woodwork etc. • Advantage is the legal requirement to attend school until the age of 18 • 18 hours per week practical lessons • Educate workers with good competencies because classes are assigned as 'producing classes'. 	<ul style="list-style-type: none"> • Limited resources – staff, lessons, rooms • Not all students can follow their first choice • Age limit – what happens after aged 18 years? • The point that the survey is taken may influence the score by the students i.e. depending on current self esteem • Students/teachers may feel not being part of the "real" school • Students have to make their course choose to early • Survey may be too complex for this type of student.

<ul style="list-style-type: none"> • Strong actions on no-show to classes – call, extra work, implementation is critical • Small classes • Individual assessment with the teacher • Direct and positive feedback from the clients • Continues improvement throughout using Quality Circle (two improvements after each survey). • Fast results after survey leading to instant analysis • Consistent analysis of historic data to show long term improvement • Simple/easy system 	
<p>Opportunities</p>	<p>Threats</p>
<ul style="list-style-type: none"> • Students might improve their self-esteem • Growing number of students • Combining English classes with production classes • Different context for introducing English • Opportunity for employment in wider range of job areas • More flexible approach for the student: switch courses if appropriate • New technologies involved in education. • Labour market needs more workers • Boost for the economy • Link with the companies to create new competencies • Schools are developed to reflect the needs of companies and society • Long term strategy by strong school relationships – local government and chambers • Less unemployed people • Less people living on social benefits • Break the culture of not working. 	<ul style="list-style-type: none"> • Personal circumstances do not support studying • Financial blocks • Dropouts although system is in place to prevent this happening • Political situation might affect the financing of this school type. • Class sizes • Personal involvement of teachers might result in burnout • Government system restrictions (too much practice in PK) • Limited availability of teachers especially English (only 0.5 years) • ICT problems during survey time • Economy going down.

Reflection and awareness on possible weaknesses and threats

In the preceding SWOT analysis an overview was given of the Strengths, Weaknesses, Opportunities and Threats of the BBS Syke EUROPASCHULE guidance system for level-1 students. In the following section, the strengths and opportunities are integrated in a Step-By-Step Implementation plan which can be used in implementing all or parts of the system. However, in doing so, it is important to be aware of the opportunities and threats BBS Syke EUROPASCHULE is facing in the used guidance system. Therefore, in the following paragraph a reflection can be found on the main and most important potential opportunities and threats based on the results of the SWOT-analysis. This reflection serves to balance the potential strengths and weaknesses and should be taken into account when implementing all or part of the BBS Syke EUROPASCHULE guidance system for level-1 students.

Reflections on Opportunities

1. Rotation within the programme rather than a fixed course i.e. spent time in each practical element but still developing their life/social skills.
2. Collect the needs of society and companies to plan for the future
3. Invest in future orientation

Reflections on Threats

1. Have additional support staff or counselling to support students who may have challenging personal circumstances.
2. Financial pressure – lobbying and marketing to politicians to sell the programme
3. Support for teachers to limit burnout – including personal work counselling, time management courses etc.



RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION OF LEVEL 1 GUIDANCE SYSTEM (BBS SYKE EUROPASCHULE)

Prevent the number of learner dropouts and increase the number of certified learners:

- Learners with previous dropout history are engaged in their own application process for the level 1 course
- Clarify previous dropout issues with individual learners in order to avoid occurrence of similar situations and create individual guidance plans
- Ensure that learners are able to enrol on their first choice of professional learning route to maintain engagement and motivation
- Whenever appropriate learning activities should take a practical form
- Learners with dropout history should be able to enrol at any point during the academic year to minimise time out of education
- Small teaching/guidance/support teams should be established with consistent membership to encourage trust building between learners and staff
- Learners should be given individual guidance based on their personal learning and social needs
- Groups should be kept small and ideally consist of no more than 12 learners
- Use real business models for professional learning route (real assignments, financial rewards, real customers, real money transactions)
- A learning agreement should be developed, explained and clarified with each learner and signed by learner and staff representative
- Individual learning plans with teaching guidance and coaching should be created for learners, including identifying and addressing learning barriers using additional support where appropriate

Increase the number of apprenticeship starters:

- Educational/training organisations should develop a strong network of external partners to provide multiple and varied professional learning experiences
- Learners should gain familiarity with the labour market through practical training in external partners within the level 1 course
- Learners should be given assistance in researching and identifying apprenticeship opportunities and support/coaching in the application process
- Educational/training organisations should develop a strong network of external partners to provide multiple and varied professional learning experiences

- Learners should gain familiarity with the labour market through practical training in external partners within the level 1 course
- Learners should be given assistance in researching and identifying apprenticeship opportunities and support/coaching in the application process



Increasing satisfaction ratio of learners and teachers:

- Ensure that a quality system survey/questionnaire is developed and implemented on a regular basis to measure satisfaction levels (once a year minimum) and allow continuous improvement analysis
- Survey results should be clear and easily accessible to all
- Survey results should be quickly analysed in order to create an action plan and put improvements in place immediately
- Prioritise a number of SMART action points based on the outcomes of the surveys
- Evaluate each action regularly and give feedback to learner/teacher at each stage

EVALUATION

After analysing the BBS Syke level 1 guidance system the following conclusions can be drawn:

Advantages

The guidance is in line with the ECVET approach (knowledge, skills and competences) with a strong focus on testing in real life situations/daily business in order to achieve the envisaged (re-)integration into school, working and social life of learners. A small number of teachers (max. 4) ensures focused guidance supported by an especially assigned social educator for these classes only.

Disadvantages

As the presented guidance system is very intense when it comes to the interaction between teachers and learners it creates a high pressure on the involved teachers. Furthermore the small number of teachers may lead to problems on both sides.

Tips for implementation

Because of the many requirements to guarantee a high quality guidance many stakeholders are involved resulting in an ongoing implementation period with step by step improvements.



ANNEXES

3. Agenda and Minutes 1st QMS4VET project week
4. BBS Syke Europaschule presentations



QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe



PROJECT WEEK REPORT

2nd Project week (13 – 17 May 2019, Livingston, UK)



ABSTRACT

Students are increasingly subject to social, financial and health difficulties which may impede their learning journey and potentially prevent continuation of their studies. West Lothian College has developed an integrated system of support and intervention designed to help students to remain at college and achieve successful outcomes

QUALITY CATEGORY

- Guidance
- Learning
- Examination

QMS4VET Consortium

The partners within the QMS4VET project are:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungscener (www.bitschulungscener.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

INTRODUCTION

West Lothian College is a Further Education Institution located in Livingston, West Lothian, in the Central belt of Scotland close to Edinburgh. West Lothian is experiencing economic and population growth which is set to continue but also recognises multiple levels of deprivation within the population which impacts negatively on mental and physical health and employability. The College has a focus on providing vocational training for industry but is now also focused on education for students from age 16 upwards and engaged in the learner journey from school to college to university.

The College put together a team of colleagues from across curriculum and service areas to showcase the integrated support system which has been developed and implemented in reaction to the growing demand from existing and prospective students for support with physical, mental and learning difficulties in order to achieve success in their learning programmes. This is a system which can be adapted to suit the circumstances of any interested organisation.

A video about the Learner's Journey of Support and Guidance at West Lothian college can be found here: <https://youtu.be/S3igkfrlcs>



For more information about the QMS4VET project and other project week reports see <https://www.ventus.nl/qms4vet>



OBJECTIVES

The following objectives were set for best practice with respect to the West Lothian College guidance approach:

Ensure:

1. that learners successfully complete their learning programme;
2. that existing problems are identified or recognised at the earliest opportunity;
3. that earners are well informed and well supported;
4. that there is an efficient evaluation system to feedback to management from students.

METHODOLOGY

The overall aim of the West Lothian integrated support initiatives is to allow all our students access to learning programmes, a safe and welcoming learning journey and ultimately, successful learning outcomes. In order to ensure this, the following objectives have to be met:

1. Learners successfully complete their learning programme

In the context of the West Lothian College guidance approach, the guidance system ought to be designed in such a way that student's challenges will be overcome and lead to a successful completion of the learning programme.

An efficient guidance and support system should ensure that, at the end of the learning programme, each student is capable of achieving the best possible qualification according to the ECVET standards (knowledge, skills and competences).

2. Existing problems are identified or recognised at the earliest opportunity

Students should be encouraged to declare a support need and to seek help and support at every stage of approach to the college, from first enquiry to application, then enrolment and onwards through their entire learning journey.

The process for students to engage with the support team should be well-advertised and very visible in the places that students would look for information. The process should be clear and easy to understand and all staff should be aware and ready to help students to make an approach to the support team

3. Learners are well informed and well supported

The students should receive a positive induction into the College ensuring a warm welcome and a safe start. During the first month, all students should be kept informed about the support available to them including learning support, Student Association and any personal support that may be needed.

During the learning process students should be supported if needed. Students must be able to ask for support at any time from their Support Team, who can then respond immediately, together with the lecturer, by putting the appropriate measures in place.

4. There is an efficient evaluation system to feedback to management from students

An effective evaluation tool, such as the 'Sparkle' model (see Appendix 2), should be developed and rolled out at specified times. Feedback should be provided to all internal and external stakeholders and management act on feedback to make improvements



SWOT ANALYSIS

The following analyses the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the West Lothian College case study.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Lecturers can concentrate on teaching and do not have to worry about basic guidance, as other colleagues carry out this responsibility • Support team numbers are flexible for example the team growing on demand when increased support and guidance is needed • The learner journey is clear and the path the students follow is clear and well organised • The support team is located in one area and information is held centrally • Barriers to learning are reduced for the students • Mental health care is important to the team • The Student Induction process raises the profile of the support team and other support available, helps students to understand the procedures and helps the student to feel welcome, improving the attendance of the students and allowing them to 	<ul style="list-style-type: none"> • Difficulty in recruitment of specialist/qualified staff • A budget must be found to finance the resources • Student Association President and Vice President only in roles for a guaranteed one year and maximum two years • Lecturers are distanced from basic guidance tasks and will not have enough basic information about the students and training on how to deal with students with additional support needs. • Positive destinations are not given enough credit by government • All staff may not be aware of support and able to signpost students correctly • Formal contact between student and support team needs to be more proactive and frequent • Communication could be stronger and more effective between internal teams

focus on their courses, as they are well prepared and informed

- Support workers have good relationships and partnerships with external agencies to support the students, for example social work, mental health agencies etc
- The Student Association has developed excellent questionnaires and the fact that they are sabbatical students gives them understanding of what the student experience is like
- Feedback from the questionnaires is directed to management and actioned
- The basic need of students are catered for, for example free soup, toiletries etc
- There are various different methods of support, for example one to one, group sessions etc
- Managers are involved in all aspects of support for the students
- Support and guidance is driven by student success, not by financial considerations
- The Student Association are strong, motivated and professional, well organised and well informed
- The Student Association Development Officer provides continuity, has an overview of activities and is well informed
- The Student Association is independent from the college management as the student's voice
- Induction is broken up over several days so that students don't get too much information at once
- Employer involvement in course development and work experience breaks down barriers between employers and students as potential employees
- Support and guidance is not dependent only on certain people but mainstreamed across the whole organisation
- Students are all made to feel included and welcomed
- There is a flexible and adaptable approach to the support structure within the college
- Students experience the security of being taken care off throughout the whole study process
- Support and guidance as a core strategy of the whole college makes sure that it is given the necessary importance and resources
- Information for students is visible through campaigns and posters everywhere on campus
- The Student Association create direct feedback from the students and therefore continuously improve the full guidance system

- No follow up support after college programme has ended
- There is no formal process to gradually decrease support in preparation for student to go on to university or employment
- West Lothian College is identified as a hub to be able to provide support to students and may get increasing demand for support
- Not all students are aware of support opportunities for example, the modern apprentices
- Not all students will take part in surveys
- No formal process for support team to collaborate with lecturers, not proactive enough, more reactive
- Infrastructure missing for sharing knowledge and best practice between lecturers, students and support team
- Too much support may result in students not being independent enough for industry/university



Opportunities	Threats
<ul style="list-style-type: none"> • People with low income/funding issues, physical or mental ill health and other learning support needs have the opportunity to become students and gain a qualification • Offer students a follow up after the initial induction to ensure understanding of signposting and to ensure easy access to information. • Teaching staff could focus on teaching only, with no overlap with support areas • The wider community could benefit from the support available • There could be increased involvement with employer engagement allows good support to the students as the workplace can be advised of any issues for the student when they are placed (in agreement with the student) • Business opportunities could be maximised by making services that complement the learning available to the public, for example mechanics fixing the cars of real customers. The College must take overall responsibility at point of retail • There should be greater support for students in developing their CVs, application skills, interview skills and generally helping students into employment • Set up formal infrastructure to regularly involve students and the support team to keep their profile high with the students, for example develop a 'support app' (e.g. by IT students) for students so they can input their issues and be guided to the right person for support and highlight activities • Issues identified in 'Sparkle' could be used to highlight professional development opportunities for staff 	<ul style="list-style-type: none"> • No specific way of measuring impact of support activities – can support be linked to student success • How do you determine if your process is successful – are there sufficient methods of measuring success • Not all students are comfortable in asking for support because of social stigma • Is there enough consistent access to external support services for students and do the service providers have enough time to invest in individuals • A financial imbalance between guidance and vocational spending might result in a lower vocational skillset • Data protection and privacy, if not handled correctly, might be an issue in preventing the sharing of student support requirements with external agencies • College budgets are dependent on Governmental funds and changes in Government priorities may reduce available finance • Professionalisation of Student Association support work might lead to less enthusiasm and enrolment in the lead roles • Wider community issues ie home situation, poverty and homelessness may affect student engagement • Lecturers disengaged from the support process may not recognise the need to refer students for support

Reflection and awareness on possible weaknesses and threats

In the preceding SWOT analysis an overview was given of the Strengths, Weaknesses, Opportunities and Threats of the West Lothian College integrated system of support. In the following section, the strengths and opportunities are integrated in a Step-By-Step Implementation plan which can be used in implementing all or parts of the system. However, in doing so, it is important to be aware of the weaknesses and threats West Lothian College faces in implementing this guidance and support system. Therefore, in the following paragraph a reflection can be found on the main and most important potential weaknesses and threats based on the results of the SWOT-analysis. This reflection serves to inform potential users of some vital basic steps to put in place when considering implementation of all or part of the West Lothian College integrated system of support.

1. Recruit people with appropriate qualifications and develop existing staff by providing development opportunities.
2. Allocate sufficient resources needed to implement and sustain the envisaged system both internally and externally.
3. Assign a professional College employee responsible for guiding and supporting the Student Association who have democratically elected President and Vice President.
4. Ensure lecturers have basic knowledge of the guidance system and student's additional needs requirements, and keep involved throughout the learner's journey.
5. Try to involve and influence local and national decision makers including external (healthcare and employers) organisations and political influencers.
6. Encourage the ongoing contact between the student and support team including the lecturer where appropriate.
7. Develop and implement a formal communication and promotion plan.
8. Ensure students are prepared for moving on from College and where to access further support once College has ended (warm transfer)
9. Develop and implement a process for monitoring and evaluating the guidance and support system.
10. Easy access to support system by taking social stigma in to account.
11. Make surveys and information easily accessible; use Apps and gamification to appeal to students.
12. Induction should be broken up over several days
13. Ensure user friendly processes are implemented for all to understand
14. Remember data protection responsibilities and use the principle of privacy by default.

RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION

The following recommendations can be used when implementation of all or parts of the West Lothian College student support system is considered.

- Identify the needs of an intensive guidance and support system.
- Guarantee the support of management for the support process
- Create a plan to define the learner journey to include targets, finances, planning.
- Identify and find the resources – financial and human
- Team is formed to work collaboratively and are all very approachable and accessible to the students so they feel welcome
- Identify, contact and inform the networks internally and externally (for example employers) who will support the learner journey, engaging them in a partnership approach.
- Develop the most appropriate tools that will be used proactively to support the students and to share information with staff.
- At the start of the academic year, promote to students to enable it to be embedded throughout their college experience and inform the students of the guidance support in place.
- Management must be involved in all aspects of support for the students and should promote the support activities

The following recommendations are specific to particular areas of the support system.

Induction:

- Ensure a follow up induction is frequently offered.
- Ensure that the students feel welcome, well treated and well supported.
- Induction should be broken up over several days

Student Association:

- Student Association should be independent, professional, well organised, well informed and motivated
- Management must commit to act on feedback generated by student surveys
- Assign a professional College employee responsible for guiding and supporting the Student Association who is able to act independently from management
- Gather direct feedback from the students and therefore continuously improve the full guidance system

Recharge Model:

- Ensure that the students have access to basic necessities such as food, hygiene products and financial resources
- Promotion of student success stories

Student Support Team:

- Ensure that assessment of student's support needs is diagnosed and support plan in place as soon as possible
- Ensure that support team members are appropriately qualified to support the varying needs of each student and are signposted to external experts when necessary (financial, mental health, social, addiction etc.)
- Ensure that different approaches are available to students according to their needs, such as one to one, class groups, equipment etc.
- Ensure all students are aware of the support available and have the opportunity to disclose their needs at any point during the academic year, such as application form, during interview, enrolment, induction etc.
- Ensure that the student support process and toolkit is clearly defined, checked and evaluated and is in use by all staff
- Ensure that opportunities for students to engage with the Student Support Team at every stage in their learning journey are transparent and well-advertised
- Offer students a follow up after the initial induction to ensure understanding of signposting and to ensure easy access to information



EVALUATION

After analysis of the West Lothian College integrated support system the following conclusions can be drawn:

Advantages

The system allows students with social, financial, learning and/or health difficulties to access various flexible methods of support not only from the start of their learning journey but at any point along the way, should their circumstances change. It is a well-advertised system and allows those who might normally hesitate to enrol in further or higher education to access learning, improve their skills levels and make positive life changes which also impact positively on their families and the wider community.

The system also engages trained experts to support the students, which allows the lecturing staff to concentrate on high quality delivery and assessment of the learning programmes.

Disadvantages

The system requires engagement from senior levels of management in order to allocate appropriate resources and funding; however there is no guarantee that the students attracted by the high levels of support will actually be able to successfully complete their learning programmes. This may have a negative impact on the amount of funding that an organisation is able to claim from government or other sources, and the organisation may struggle to sustain required levels of learner success.

Tips for implementation

Create a plan to define the learner journey to include targets, finances, planning and resources, and only proceed if the support of management for the support process can be guaranteed.



ANNEXES

5. Agenda and Minutes 2nd QMS4VET project week
6. West Lothian College presentations



QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe



PROJECT WEEK REPORT

3rd Project week (28 Oct. – 1 Nov. 2019, Porto, PT)



ABSTRACT

Because of the growing digitalisation of society and industry there is a growing demand for people with programming skills. The micro:bit system is an accessible and easy to use educational tool to make interested people familiar with the basics of programming, while students develop additional soft skills.

QUALITY CATEGORY

- Guidance
- Learning
- Examination

QMS4VET Consortium

The partners within the QMS4VET project are:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungscener (www.bitschulungscener.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

INTRODUCTION

ATEC is a private Training Academy certified by ISO 9001:2015 with its headquarters located in Palmela, south of Lisbon, and with a delegation in the North region of Portugal in Matosinhos, Porto. ATEC is focused on providing EQF level 4 and 5 technical vocational training to young people and adults, and also to employees from companies that select ATEC as their training provider.

During QMS4VET third project week, ATEC put together a team of colleagues and students from the Robotics and Mechatronics areas to introduce the Project Week Participants to the micro:bit teaching approach (see www.microbit.org).

A video about the Integration of Microbit into ATEC's level 4 qualifications at ATEC can be found here: <https://youtu.be/5E1cav7SyFQ>



For more information about the QMS4VET project and other project week reports see <https://www.ventus.nl/qms4vet>



OBJECTIVES

The following objectives were set for best practice with respect to ATEC's micro:bit education program:

Ensure that:

1. awareness, interest and basic skills are created in programming;
2. attractiveness of their educational programmes is improved;
3. soft skills through team learning is improved.

METHODOLOGY

The overall aim of ATEC's micro:bit education program is to include computer programming in their curriculum. This element of the total curriculum is organised in a special Creative Lab, a classroom with computers and relevant hardware. A mentor/coach delivers tasks/assignments to the students which they have to undertake individually or in small teams.



In order to ensure the overall aim, the following objectives have to be met:

1. Create awareness, interest and basic skills in programming

By using the micro:bit system in the education program, students are confronted with programming assignments with increasing complexity. The micro:bit system ensures a user-friendly methodology to achieve these objectives and enhance logical thinking skills.

2. Improve attractiveness of their educational programs

The micro:bit system ensures an attractive, practical, 'learning by doing' methodology with visual tools (drag and drop) to build a program. Practical work is motivating because the students can see the immediate results of their efforts.

3. Soft skills through team learning is improved

This is achieved through an informal and interactive learning environment, which means that certain tasks/assignments have to be undertaken in small groups which stimulates the reinforcement of soft skills like cooperation, communication, creative thinking, problem solving and team building.

SWOT ANALYSIS

The following analyses the Strengths, Weaknesses, Opportunities and Threats (SWOT) of ATEC's case study.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Fun and engaging • Clear immediate results – instant feedback on assignment • Inexpensive resources • Intuitive learning • Simple and easy to understand (non-technical people) • Applicable across all curriculum areas • Contemporary and relational to young people • Practical, hands-on learning • Easy route into STEM engagement • No language barriers • Increase knowledge of English • Basic learning skills required (no previous experience) • Diverse range of learners and providers • Lots of additional affordable hardware available • Lots of example programmes available • 'Plug and play' and open source 	<ul style="list-style-type: none"> • Needs practical demonstration to engage users • Knowledge depth is limited • Teaching staff need to be knowledgeable, flexible and engaged • Extra attention necessary for connection with social/soft skills • Preparation time required for teaching staff • Restrictive tech – large gap between learning environment and industry • Over-simplification limits programming connection with technology
Opportunities	Threats
<ul style="list-style-type: none"> • Introduce coding to young people over 5 years old and increase number of future students in STEM field • Start-ups, for example sell services • Promoting VET-school marketing – co-operation with other schools • Good marketing tool – attract wide variety of learners • Promote distance learning and independent learning • Opener to learn another language or even coding languages like JavaScript • Filling future market demand for coders • Address gender balance in STEM subjects • Upskill teaching staff in non-technical areas • Introduce use of technology into broader curriculum 	<ul style="list-style-type: none"> • Product becomes obsolete if Microsoft withdraws from project • Difficult to hire staff to teach classes (unpaid prep time) • Unwillingness of teaching staff to create new curriculum and resources, to engage and to teach • Dependent on creative thinking to embed into curriculum



Reflection and awareness on possible weaknesses and threats

In the preceding SWOT analysis an overview was given of the Strengths, Weaknesses, Opportunities and Threats of ATEC's programming/coding education programme. In the following section, the strengths and opportunities are integrated in a Step-By-Step Implementation plan which can be used in implementing all or parts of the system. However, in doing so, it is important to be aware of the weaknesses and threats of ATEC's programming/coding education program. Therefore, in the following paragraph a reflection can be found on the main and most important potential weaknesses and threats based on the results of the SWOT-analysis. This reflection serves to inform potential users of some vital basic steps to put in place when considering implementation of all or part of ATEC's micro:bit programming/coding education program:

1. Allocate the necessary resources to guarantee successful practical demonstration of the program.
2. Integrate micro:bit in an initial stage of the training program to engage students into the programming/coding learning activities and make sure to complement it with real life industry technology.
3. Use micro:bit as a basis to integrate different learning subjects, including soft skills like English language, communication and/or team work.
4. Develop your trainers to use micro:bit to its full potential (use micro:bit website) and to use it integrated in the training program, including the validation of the learning outcomes.
5. Make sure you are not over dependent on one single technology to develop your training program.

RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION

The following recommendations can be used when implementation of all or parts of the ATEC's programming/coding education program is considered.

Step 1 – Gathering information:

- Study the micro:bit website <https://microbit.org>
- Carry out a workshop at school that is using micro:bit in education

Step 2 – Planning and Piloting:

- Assign the project leader
- Prepare a business plan outlining your intentions/ goals, budget, resources and facilities
- Promote the micro:bit learning system in your organization and find the early adaptors
- Let early adaptors start a pilot with early adaptor students
- Evaluate the pilot

Step 3 – Incorporate into curriculum:

- Prepare an implementation plan including intentions/ goals, budget, resources and facilities
- Incorporate the early adaptors in the development of the curriculum
- Develop curriculum according to intentions/ goals

EVALUATION

After analysis of ATEC's programming/coding education program the following conclusions can be drawn:

Advantages

By integrating the micro:bit programming/coding education program in their curriculum, ATEC has found a low cost and effective solution for raising awareness, interest and basic skills in programming/coding, improving the attractiveness of their educational program and stimulating the learning of soft skills.

Disadvantages

Although the implementation of the micro:bit method does not require huge amounts of money, it is good to recognise that it needs investments in staff to get familiar with the system and create curriculum, and in addition that the micro:bit methodology is suitable for basic programming/coding education, but not for more sophisticated/ industry standard requirements.

Tips for implementation

Study the www.microbit.org website and visit an education centre which already works with the system to get hands on experience. Make a business plan, organise a pilot phase, evaluate, make an implementation plan, implement and evaluate.

ANNEXES

7. Agenda and Minutes 3rd QMS4VET project week
8. ATEC presentations





QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe



PROJECT WEEK

REPORT

3rd Project week (28 Oct. – 1 Nov. 2019, Porto, PT)



ABSTRACT

The demands of general industry are for employees with increased levels of knowledge and skills applicable to each sector. ATEC has developed an integrated examination approach designed to add value to the qualification and improve the probability of superior employment opportunities for students

QUALITY CATEGORY

- Guidance
- Learning
- Examination

QMS4VET Consortium

The partners within the QMS4VET project are:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungscener (www.bitschulungscener.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

INTRODUCTION

ATEC is a private Training Academy certified by ISO 9001:2015 with its headquarters located in Palmela, south of Lisbon, and with a delegation in the North region of Portugal in Matosinhos, Porto. ATEC is focused on providing EQF level 4 and 5 technical vocational training to youngsters and adults, and also to employees from companies that select ATEC as their training provider.

During the QMS4VET third project week, ATEC put together a team of colleagues from the IT area to showcase the German Examination process from AHK, which is integrated in the level 5 Network and Systems Administration Specialist curriculum.

A video about external certification of competences (AHK example) applied by ATEC can be found here: https://youtu.be/d8BeM4fF_NM



For more information about the QMS4VET project and other project week reports see <https://www.ventus.nl/qms4vet>



OBJECTIVES

The following objectives were set for best practice with respect to the ATEC integrated examination approach:

1. Certify that learners have acquired a widely recognised high quality level of competences;
2. Add value to an existing qualification;
3. Introduce a certificate which is transferable internationally in the relevant subject area;
4. Enhance the probability of superior employment opportunities for students;
5. Address an identified market need.

METHODOLOGY

The overall aim of the ATEC integrated examination approach is to allow all students to gain a qualification which is recognised and valued in all countries with presence of German Industry in order to expand their employability opportunities, especially in Europe. In order to ensure this, the following objectives have to be met:

1. Certify that learners have acquired a widely recognised high quality level of competences

In the context of the ATEC integrated examination approach, the exam system ought to be designed in such a way that all requirements of the awarding body are fully realised.

An efficient examination system should ensure that, at the end of the learning programme, each student has acquired all the skills necessary to perform the duties expected by the awarding body and the employer, according to the ECVET standards (knowledge, skills and competences).

2. Add value to an existing qualification

The ATEC integrated examination approach should be implemented in such a way as to enhance the content of the existing qualifications.

3. Introduce a certificate which is transferable internationally in the relevant subject area

The students should be able to gain knowledge and qualifications which will allow them to work within the same sector across different countries.

The integration of the German standards into the Portuguese education system allows international employers access to employees who combine the best of both systems.

4. Enhance the probability of superior employment opportunities for students;

Students achieving the qualification would have more chances of employment with companies across multiple countries, in better positions and with improved promotion opportunities.

5. Address an identified market need

The organisation should undertake sufficient research in the market with all stakeholders including employers and prospective students in order to ensure that there is a demand for the integration.



SWOT ANALYSIS

The following analyses the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the ATEC case study.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Industry relevant • Based on skills and competences (learning outcomes) • Simple and effective structures • Included in the education programme • Unique selling point for ATEC • Improved and strengthened relationship with important stakeholders • Increasing international employability chances • ATEC is sector role model for innovative integration practice • ATEC staff and technical resources are top class and high quality • Student levels of knowledge are validated by external AHK assessment requirements • Transferability of integrated AHK programme system to other sectors (best practice) • Certain parts of teaching are online leading to self-learning and independence • ATEC can pick the motivated students and deny/ reject others • AHK is recognised within sector circles and secures a certain quality standard worldwide • ATEC provides everything the student needs • Small number of students allows a high-quality standard because of limited availability of high-quality teachers • Close co-operation between teachers provides a high standard and AKH standard support • Close cooperation with companies allows to be up to date 	<ul style="list-style-type: none"> • Time gap between teaching and assessment • Higher risk of failure with condensed exam period • Exam times not student centred • Only 50% success rate of programme • Students don't understand the value attributed to AHK qualification • Soft skills are not officially assessed in the AHK certificate • Assessment is too heavily end-loaded • Fixed programme does not specifically adapt to student's needs • No formal standardised quality management process to gather student feedback and allow changes • No formal standardised process to gather companies' feedback and allow changes
Opportunities	Threats
<ul style="list-style-type: none"> • Flexible adaptation to new standards, programmes and customer demands • Roll out AHK system throughout Europe and beyond • ATEC system can be adapted for other industry assessments • Include German language program in AHK program – more job opportunities • Use the potential for growth 	<ul style="list-style-type: none"> • Is programme flexible enough to adapt to changing AHK and sector requirements • Political and trade relationships (Portugal/Germany) may change and affect attractiveness of qualification • Government financial decisions could remove funding for exam after 2023 • Overflow of information: how to select and gain without information?

- | | |
|---|---|
| <ul style="list-style-type: none"> • Improve ATEC brand by raising AHK awareness with non-German companies • Include AHK programme in commercial programme? | <ul style="list-style-type: none"> • System could be too rigid for some students: requires complete commitment • Student retention negatively impacted by condensed examination period • Students can be deterred because of extra work and unknown added value • How to keep the motivation level throughout the course – threat of paid job alternative |
|---|---|



Reflection and awareness on possible weaknesses and threats

In the preceding SWOT analysis an overview was given of the Strengths, Weaknesses, Opportunities and Threats of the ATEC integrated examination approach. In the following section, the strengths and opportunities are integrated in a Step-By-Step Implementation plan which can be used in implementing all or parts of the system. However, in doing so, it is important to be aware of the weaknesses and threats ATEC faces in implementing this integrated examination approach. Therefore, in the following paragraph a reflection can be found on the main and most important potential weaknesses and threats based on the results of the SWOT-analysis. This reflection serves to inform potential users of some vital basic steps to put in place when considering implementation of all or part of the ATEC integrated examination approach.

1. Evaluate continuously market needs and advantages of such an approach
2. Collaborate with awarding bodies, decision makers and stakeholders to ensure that integration will add value and is agreed by all stakeholders
3. Identify your capabilities in terms of teaching, equipment, funding and facilities
4. Identify where staff and resources can be repurposed
5. Create the course content according to market needs and quality standards of the awarding body
6. Train staff according to their needs and the requirements of the awarding body
7. Keep students well informed about the advantages of such an approach
8. Identify and target potential sources of applicants
9. Arrange for exam materials from awarding body and adapt for use within training programme
10. Train students focusing on examination criteria/standards
11. Evaluate students and success of training
12. Get feedback from external stakeholders on quality of students
13. Integrate external stakeholders feedback into the teaching system when needed.

RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION

The following recommendations can be used when implementation of all or parts of the ATEC integrated examination approach is considered.

- Identify relevant market indicators including stakeholder feedback and potential applicant availability and apply an appropriate research model
- Ensure that all required awarding bodies and employers have given input to the programme content and agree that value has been added to the qualification. Focus on pointing out the added value of the integrated approach in comparison to the standard approach in order to emphasise your unique selling point (USP)
- Refer to staff skills matrix, equipment and facilities logs and ensure that sustainable funding is in place before marketing the programme to applicants
- Ensure that staff training is available if necessary and that facilities are appropriately equipped
- For the content of the training programme a detailed and well-prepared curriculum, which also includes preparatory time for the final exam, is mandatory
- Develop advertising for the programme which will reach and attract your target applicants
- Ensure that an evaluation tool is developed which will effectively cover all areas of the programme and give required insights into results and value
- Gather feedback from external stakeholders using an effective mechanism to ensure that all relevant data is retrieved and analysed to inform improvement actions if necessary

EVALUATION

After analysis of the ATEC integrated examination approach the following conclusions can be drawn:

Advantages

The approach facilitates an education which is currently not available anywhere else in Portugal. It provides students with a quality standard that is recognised throughout different countries and increases their employment opportunities.

The approach also gives students a high-quality delivery and assessment of the learning programme and the model can be transferred to other education providers.

Disadvantages

The approach requires engagement from external stakeholders and successful marketing of the unique selling point. It is dependent on market demand and sufficient high-quality applicants capable of completing the course. Resources must be committed to the approach and funding must be sustainable. Substantial time and effort would be required to implement or to make changes once the approach has been established.

Tips for implementation

Create a plan to define the learner journey to include targets, finances, planning and resources, and only proceed if the support of internal and external stakeholders for the approach can be guaranteed.

ANNEXES

7. Agenda and Minutes 3rd QMS4VET project week
8. ATEC presentations





QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe



PROJECT WEEK REPORT

4th Project week (20 – 24 January 2020, Kajaani, FI)



ABSTRACT

Because of the changes in working life, Vocational Education and Training must be able to meet these changes and requirements within education programmes and curricula must have a tight connection to working-life. Qualifications are no longer based on time but on competences. All these new insights create a need to build a system where it is possible to start the studies and study individually.

QUALITY CATEGORY

- ✓ Guidance
- ✓ Learning
- ✓ Examination

QMS4VET Consortium

The partners within the QMS4VET project are:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungcenter (www.bitschulungcenter.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

INTRODUCTION

Kainuun ammattiopisto offers vocational education and training for young people and adults in Social and Health Care, Culture, Business and Administration, Nature and Land Based Industries, Tourism and Catering and Technology and Logistics. Kainuun ammattiopisto operates mainly in Kainuu and Kuusamo region and it has a unit in Vantaa near Helsinki. Kainuun ammattiopisto is a municipality enterprise owned by the city of Kajaani.

Currently in Kainuun ammattiopisto there are 2 300 young and adult students studying for a vocational upper secondary qualification, 3 500 students in other adult education and about 400 students on the average in apprenticeship training. There are currently about 300 employees.

During the 3rd QMS4VET project week, Kainuun ammattiopisto put together a team of staff members and students from many sectors to introduce the Project Week participants to individual and flexible pathways in Vocational Education and Training.

For more information about the QMS4VET project and other project week reports see www.ventus.nl/qms4vet



OBJECTIVES

The following objectives were set for sharing best practices with respect to Kainuun ammattiopisto's Individual study paths/programs:

In order to realise individual study paths/programs, Kainuun ammattiopisto ensures that:

1. the admission process works as smoothly as possible and it is possible to start the studies at any time of the year;
2. the students can study according to their personal needs and schedules;
3. learning processes can happen in different kinds of environments.

METHODOLOGY

In the beginning of 2018 the legislations of Vocational Education and Training in Finland changed a lot. The reasons for that were various:

- Occupations and jobs are changing rapidly;
- Curricula must have a tight connection to working-life;
- There is need for individual paths to get the qualification;
- The qualifications are no longer based on time but on competences;
- Public funding had been cut almost each year during the last few years;
- Complexity of funding processes; youth-education, adult education, training of unemployed people needed to be more simple.

In order to ensure the overall aim (individual learning routes), the following objectives have to be met:

1. Flexible admissions:

- The students can apply for school 365 days a year;
- The studies are targeted to get a vocational qualification or just to update skills.

2. Personal competence development plan:

- All the students can have personal study paths according to the need they have;
- The students have personal study time;
- It is possible to move between different qualifications;
- Studies can continue all year round.

3. Different ways to learn:

- Learning can happen in many different ways either at school or in working life;
- Tutoring process is organised and monitored.



SWOT ANALYSIS

The following analyses the Strengths, Weaknesses, Opportunities and Threats (SWOT) of KAO's case study.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Government led initiative • WILMA (student data system): flexible, transparent – school, parent, student, ministry. Tracks history (recognition of prior learning) • VALMA: student support methodology • Competency based • 365 days/year • Start any time • Mentor interview – focus on student goals ensuring motivation is higher • Students are able to switch courses/units (where applicable) • Good employer relationships • Mindset and commitment of teachers • Distance learning • High flexibility • TRUST – on all levels • Strong relationship between schools and companies • Easier adaption of for student to real life conditions and requirements • Initiation of entrepreneurship included in the curricula • Personal path creates a sense of belonging and commitment on the student's side • Frequent personal contact between personal mentor and student • Extra-curricular courses from other areas possible to combine with personalised plan • Student can finish quicker if you put in the effort • More family friendly – quicker completion of education if needed due to family commitments • Ability to pause learning if personal circumstances change • Recognition of previous learning • More practice approach is appealing to people with negative previous experiences of education • Students more motivated in comparison with the classic educational organisation as they have had more input into content studied – less chance to get bored • More inclusive to accommodate different abilities and any learning difficulties • Student and teachers are working together to solve problems • Students are taught to be self-sufficient – increase self-belief, creative thinking, problem-solving and other transferable skills 	<ul style="list-style-type: none"> • Reduced relationships built between students if there's less face to face contact • Students don't feel part of/identify as part of the group • Socialisation between students is reduced, especially in small groups • Mentor needs to fully understand needs and intrinsic motivations of individual students • Consistency of evaluation of markers/assessors especially in the workplace • Wellbeing of teachers due to the demands placed on them • Challenging for teachers to deal with short-term changes and continuous flexibility • Mixed age groups can be a challenge • Parents regard less-free periods as holidays for students: discontent, have to adapt, have to learn to trust their own child • No times for internships abroad anymore • Dependence on willingness of teachers to change mindset etc, to fill in WILMA information • Dependence on time spent by teachers creating projects and engaging assignments • Dependence on knowledge of teachers • Dependence on skills of coaching • Dependence of good relationships between mentor and student • Dependence on amount of mentors you would have to have • Depends on strong and close relationship with companies • Awareness of student's previous skills • Lack of capability of students to make choices, express themselves

<ul style="list-style-type: none"> • The credit system (recognition of past items) is small steps combined to big success. 	
<p>Opportunities</p>	<p>Threats</p>
<ul style="list-style-type: none"> • Students can easily change path • Companies can create their own workforce according to their specific needs • More lifelong learning • Companies get the chance to give directions to new paths, room for more innovations and quicker adaption in college to changes in the world of work • Opportunities for students to experience new technologies emerging in the market • Students can create mini-companies which can provide skills for future entrepreneurs • Students can earn while studying i.e. music gigs • Improve attractiveness of the VET system • Breaking up traditional school and structures, making them more future orientated environments • Individual learning is good marketing, publicity for school • Distance learning from across country • Appealing to a larger variety of students that otherwise couldn't study • Smaller school buildings therefore less heating/running costs etc. • Individual's ability to study at own pace– can finish quicker or slower depending on life's needs/career opportunities • Integration to workforce thanks to work experience/entrepreneurial opportunities • Countrywide IT/WILMA standards means working with other schools in Finland is easier • School can increase revenue with quicker turnover 	<ul style="list-style-type: none"> • Students can abuse the trust and not complete/take part in tasks • Lack of socialisation between students could negatively affect work • Too much freedom for some students may hinder them completing their work • Political influence could affect success – enough time is needed to see if new system is successful • Employers (especially abroad) may be unsure of a student's qualification to what that means about their ability • Is WILMA sustainable long term? • High dependence on enough available companies for students to work in • Companies need to have the willingness and knowledge and time to train the students as well as running the business • Dependence on the economy, companies might not be able to keep students and have a long term focus • Depending on the reputation of the school/students companies might not be willing to take on students • Students choose another school because distance doesn't matter • Student could behave like a spoilt client • Present future support of companies – secure? • Economic situation might influence support of community and companies • Acquired skills might be too specialised/specific for employment • Long distance learning: students might prefer a school close to them and could lose personal contact • High dependency on technology • High investments needed (ICT/Staff Training) • Lots of experienced teachers are unhappy with the change (losing knowledge) • Motivation from students/teachers may disappoint over time



Reflection and awareness on possible weaknesses and threats

Implementation

Make the process of implementation strong and thorough by involving all parties. The goals, benefits, process and reason behind the new process need to be fully implemented and the mindset changed in everyone. There will need to be enough time allowed to let the process run its course without being rushed.

Preparation of changes in teaching methods

Support the teachers in being able to take on new tasks like mentoring, coaching by offer new training according to the individual needs and wishes. Manage teachers' health and well-being by ensuring the workload is not too overwhelming.

Government involvement

Establish good relationship with relevant governmental institutions. Showing good results, having regular contact to keep each other updated and increase the government's confidence in the organisation.

Companies and other organisations for work placement

Build strong, long term relationships with all parties involved. Explain the changes and reasons why. Ensure that the parties have staff willing and able to take on the mentoring role for the students in the organisation and offer support and guidance. You need to make sure that the best, most forward-thinking organisations, help to put the message across of the importance of the changes.

Students

Clear message on students being the worker and the teachers being the leader. Manage expectations. Ensure that students have enough support to work more independently than before. Support students to cope with the changes. Student support and guidance would potentially play a big part.



RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION

The following recommendations can be used when implementation of all or parts of Kainuun ammattiopisto's individual learning methodology is considered.

Trust between all stakeholders is essential:

- If possible, petition National Government of country to support a pilot with the possibility of funding to assist with the ICT and the commitment to roll out across the country.
- It is critical to identify an ICT supporting system that can support the flexible learning plan as WILMA does within Finland. It needs to be able to create the personal plan, timetables and transparency for all.

The following points must be completed within partnership (school/companies) to ensure appropriate plans are in place:

- It is critical to create good working relationships with employers, and that they understand the benefit to them and the industry by participating in the programme and developing the students.
- Implement measures to motivate teachers to change including their mindset to enable to them to see advantages of the system.
- Ensure that the organisation has a strong curriculum which is structured, and can clearly evidence the prior learning.
- Well proven functioning system to deliver effective e-learning that is reliable and well supported. In addition, training for teachers to effectively deliver in this alternative method of teaching.
- Teaching staff can offer a flexible learning plan for students, but it is imperative that they follow internal processes/procedures to ensure the effectiveness of the programme.
- A clear marketing programme to attract students and other partners and to ensure they understand the offering and the benefits of the programme for them.



EVALUATION

After analysing the Kainuu guidance system the following conclusions can be drawn:

Advantages

The guidance is according to the ECVET approach (knowledge, skills and competences) with a strong focus on a personalised study path and fully flexible adaptation to working life in order to develop the best possible competences for each learner. The goals are gained by a continuous personal mentoring process for each learner either face-to-face or using online channels to avoid unnecessary traveling.

Disadvantages

As the presented guidance system is very intense when it comes to interaction between teachers and learners it might lead to heavy pressure on the involved teachers and mentors. The highly personalised and blended learning approach might lead to a lack of social learning skills.

Tips for implementation

The Finnish approach is highly based on trust on all levels. Therefore previously executed control systems and bureaucracy need to be abolished and replaced by mutual trust, freedom and flexibility. The implementation of necessary change in mindset requires a high effort and bravery from all stakeholders and especially from the school/training center. A mandatory basis is the provided IT-system with a broad information data base and nationwide agreed competence-based system and further required data.

ANNEXES

9. Agenda and Minutes 4th QMS4VET project week
10. Kainuun ammattiopisto presentations





QUALITY MANAGEMENT
SYSTEMS
FOR VOCATIONAL EDUCATION
AND TRAINING

/PROJECT
Integration of Learning Outcomes
into Quality Management
& Harmonization of Quality
Standards in Vocational Education
and Training in Europe



PROJECT WEEK REPORT

5th project week | 9 – 11 February 2021, Graz, Austria
(ONLINE)

bit *schulungcenter*
member of **bit** group

ABSTRACT

Because of the changes in working life, Vocational Education and Training must be able to meet these changes and requirements for education.

A learning environment where learners can study with alignment to their individual progress and needs must be provided.

This is best achieved within a blended learning setting, however, this requires a suitable supportive and granular learning management system and well trained educators.

QUALITY CATEGORY

- Guidance
- Learning
- Examination

QMS4VET Consortium

The partners within the QMS4VET project are:

- Aventus (www.ventus.nl)
- ATEC (www.atec.pt)
- BBS Syke EUROPASCHULE (www.bbs-syke.de)
- bit Schulungcenter (www.bitschulungcenter.at)
- West Lothian College (www.west-lothian.ac.uk)
- Kainuun ammattiopisto (www.kao.fi)

INTRODUCTION

bit (= best in training) **schulungcenter** is a subsidiary of the bit group founded in 1986 and currently employs more than 280 experienced trainers in five Austrian states, with the headquarter in Graz. At the interface between politics, the economy and the job market, we are creating new ways and means of treading them.

Currently we deal with the digitization of learning, blended learning and competence-oriented learning and develop suitable content for digital forms of learning. In this way, we are creating new opportunities for knowledge transfer for a wide range of target groups and promoting the use of education in regional and decentralized structures. Using new media, we challenge traditional teaching methods and compare them with inverted and flipped classroom concepts. Our emphases and goals are always to ensure high quality and to boost innovation in different educational concepts to face the challenges of Industry 4.0 and the related educational issues.

Currently in **bit schulungcenter** there are 2.000 to 3.500 participants per day and annually between 8.000 and 12.000 participants within labour market related courses (e.g. German Language course, Application assistance, New (digital) Skills, Sales training with sales accounting, cash register systems and online trading).

During the 5th QMS4VET project week, **bit schulungcenter** put together a team of staff members and former students to introduce the Project Week Digital Learning Program.

A video about the bit schulungcenter's Blended Learning Settings in VET can be found here:

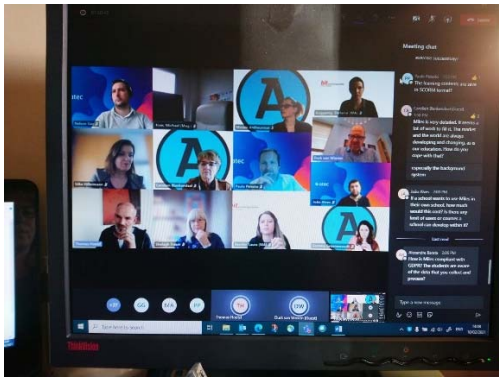
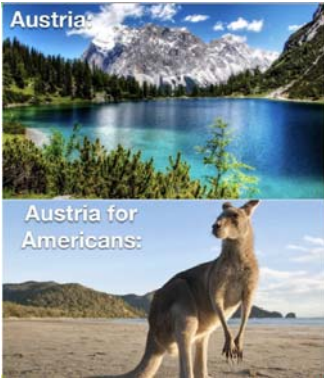

<https://youtu.be/TNqazMpezXA>



For more information about the QMS4VET project and other project week reports see

<https://www.ventus.nl/qms4vet>



	
	<p style="text-align: center;">2. Digitalize Learning: From Analysis to Strategy to Implementation</p>

OBJECTIVES

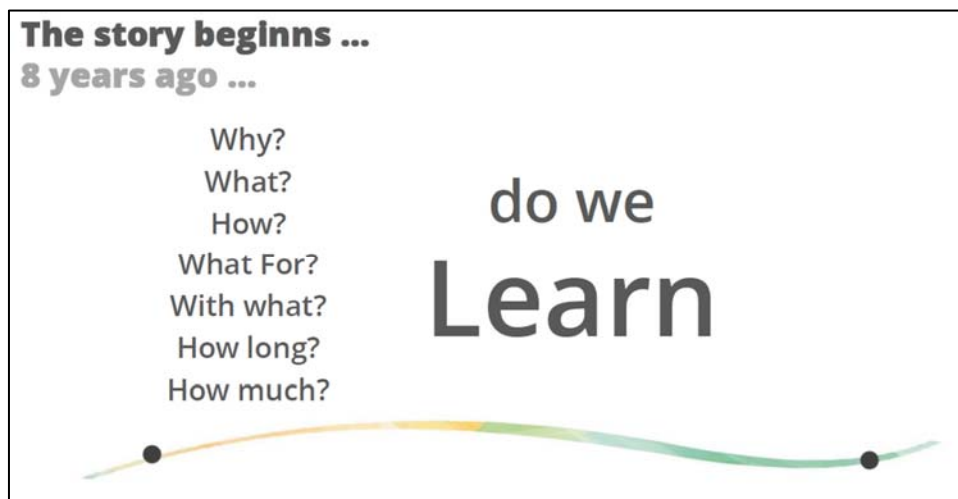
The following objectives were set for sharing best practices with respect to **bit schulungcenter**'s Blended Learning System:

In order to enrich Blended Learning programs, **bit schulungcenter** ensures:

1. Development of individuality, self-efficacy and self-responsibility
2. Time and place independent learning;
3. Filling of knowledge gaps;
4. Easy guidance through the learning process for students;
5. Easier to follow/guide the students through the learning process;
6. Educational success/course completion;
7. Support of students in finding a job.

METHODOLOGY

8 years ago, **bit schulungcenter** developed a new vision to answer the following questions:



And blended learning came up as the solution to complete their vision. The criteria set for a successful program were: Participant Satisfaction, Educational Success/Completion, Job Placement rate and Individual project success factors.

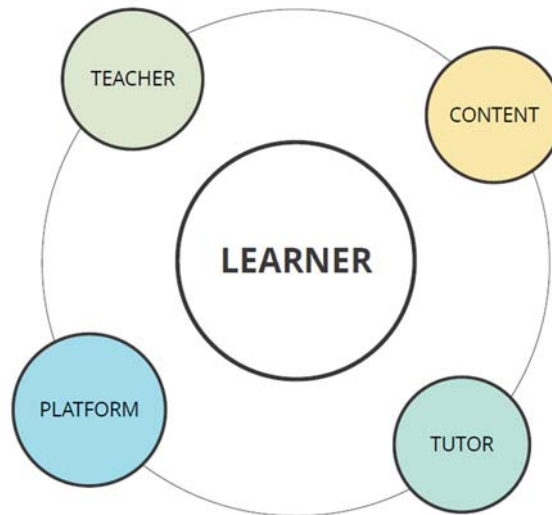
The requirements for the digital learning program were set as:

Project Profile: eLP

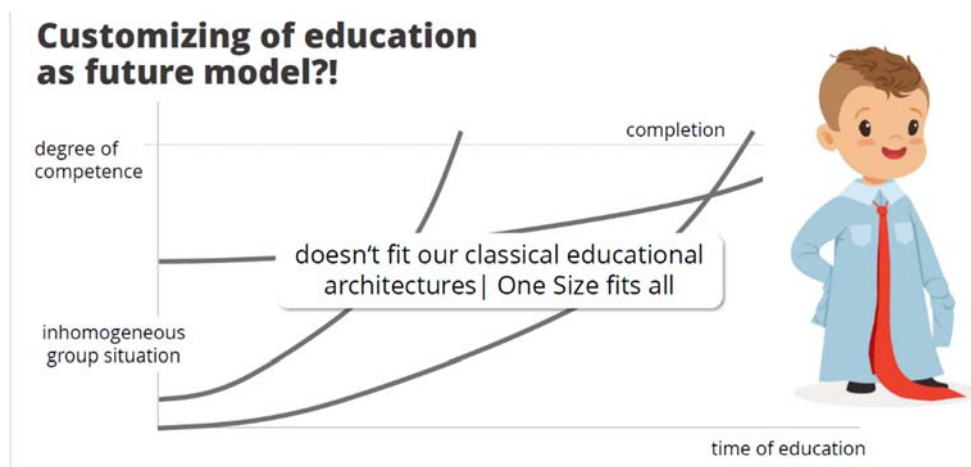
- since 15 years
- Expert Tutoring Online
- blended Learning setting
- 1 or. 2 learning in presence with guidance coach
- Free choice from portfolio
- 1500 participants per year
- 11 OR 12 weeks | individual learning time



The Learning concept for the project is “The learner is the guide”, which means the learner is at the centre of the learning process.



The blended learning solution of bit **schulungcenter** is a customizing model, focused on individual learning paths, where “one size doesn’t fit all”:



Customizing/Individualizing training means:

- Everyone can start the training anytime.
- Each training course is different to the others. (or Each training course is unique to the learner)
- Every educational contract looks different.
- Everyone learns only what is missing.

Technological System

MILES is a learning system based on didactic principles. Fine learning objectives can be considered as synapses of the system. These are “coded” (tagged) with a level of competence and a level of learning objectives. Directly and indirectly, learners interact with these fine learning objectives. The granular structure results in a vast density of data points that can be used to guide the learning process.

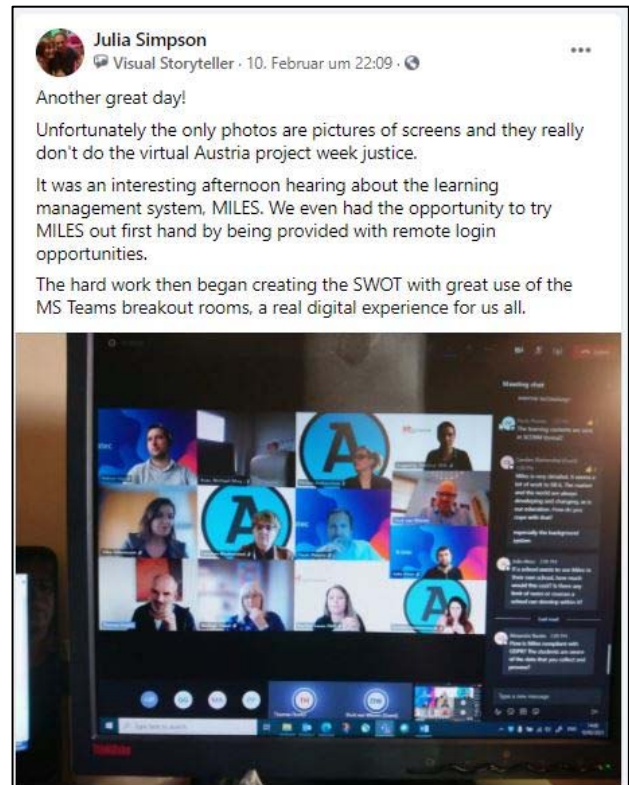
Key resources for the project:

- Unemployment public services provide students for the program
- MILES System (virtual learning environment)
- Sales Assistance, Office Administration and Accounting curricula
- Governmental certification of the courses
- Budget or funding

Obstacles:

In the beginning the time spent at the training centre was considered insufficient and it was important to find a perfect mix.

A huge investment in technology and content development had to be made.



SWOT ANALYSIS

The following analyses the Strengths, Weaknesses, Opportunities and Threats (SWOT) of bit schulungcenter's case study (the offering and organisation of individual study paths).

Strengths	Weaknesses
<ul style="list-style-type: none"> • Flexibility/customized learning content for the students • Individual timetable and start and finish dates for the learner, tailored to individual's personal circumstances, and each student is supported on his/her level of competence/individual approach • Ensures a sustainable supply of potential skilled employees for recruitment requirements • Support on completion to get in a workplace/easy access to a job • Top quality on-line tutoring • Ratio of students to trainers is good (1/12) • MILES is very user friendly for students and tutors, cloud based and responsive system (any device) • Students have easy access to Tutors • Programmes are organized in learning outcomes (using Blooms' Taxonomy) • High success rate • Flexibility of course content ensures the learner is always in the centre, including adjusting exercises when evidence shows learners lack of understand/easy to change contents and exercises • Teacher (tutor) takes the role of a guide and study partner • Enhances students' competences making students more employable • Students are more aware of their own competences and learning process / students can see their learning progress • Students can be more motivated by using digital learning • Promotes self-efficacy, self-responsibility and individuality • Works well in COVID time • Deep granularity in detail of contents allows start levels for each student to be accurately set • Coaching approach rather than teaching • Fast track to qualifications for students 	<ul style="list-style-type: none"> • This style of learning programme is not widely recognised for vocational subjects, meaning low take up of places • People could take advantage of the system to 'fast track' to a qualification. Real experience takes time to acquire and can't be learned quickly • Lot of time and money needed for planning and development of programme content • Staff must be adaptable and flexible in their approach and may need persuasion to change • Dependent on access to technology and access to Wi-Fi for students • Labour contracts outline work times and content ownership and staff may get queries from students outwith their work time which would cause delays in answering, impacting negatively on student experience • Success rates might drop as group size increases • Programmes lead to a qualification rather than employment • Students with certain learning difficulties may not be supported by this learning environment • Need for extensive training programme to attract flexible new tutors/teachers • Training needed to use MILES platform • Files not available in SCORM format • Required allocation of tutors/trainers/teachers for 12 hour of availability towards students could be too expensive

Opportunities	Threats
<ul style="list-style-type: none"> • Individual solutions for people with different backgrounds • Market for people with different learning styles • Possibility of obtaining public funds • Extendable to other educational levels • The market for this type of learning is not yet saturated • Collaboration with publishers to turn content into school books • Selling software license nationally and internationally to provide MILES to external organisations as an internal training platform • Cooperation with public organizations e.g. Voluntary Labour Corps which is organizing various forms of combatting unemployment and social pathology to refer their service users as potential students • Promote blended learning to VET schools 	<ul style="list-style-type: none"> • Resistance of tutors/learners/funders (employment service) due to changing contracts/offers from labour market service • As this setting is different, trainers/teachers could be overloaded because of teaching in a different way; lack of skills + motivation/mindset • Possible lack of investment for teacher/trainer development • Compared to open source systems (like Moodle) which are developed and updated every year, “cheaper” - MILES = huge investment • Format of files: SCORM = international shareable standard; MILES would have to specially develop this content • Without internet and a device the whole system won't work: poorest in society will not be able to join if they do not have devices/internet at home • Less or no flexibility within a structured setting (VET schools/schools, colleges) would make blended learning difficult; timetables are needed there • Competition from other blended learning companies/institutions • New competitors/technologies/concepts could make the programme less attractive • Younger students may not be supported and covered by national regulations and funding • Some legal content needs to be continuously updated

How to deal with the Weaknesses and Threats and to reduce these appropriately

Course Content:

The development of course content is very time-consuming and requires extra preparation for the online setting. A good selection of authors is therefore indispensable to ensure quality. At the same time, a product analysis should be carried out in advance to evaluate which courses should be offered in the blended learning setting and then continuously expand the portfolio. This avoids too much one-time effort and creates continuous development and up-to-date information.

Learning Management System (MILES):

The development of such a system is cost-intensive, therefore collaboration with software development companies is recommended, where existing programs are used and adapted to the needs of the organizations. Continuous development is necessary in today's digital world - this must be considered before implementing such a system.

In order to be able to use the system effectively, it is necessary to first analyse the circumstances of the participants to determine whether they also fulfil the technological requirements for the implementation of the course: Laptop, Internet access, etc.

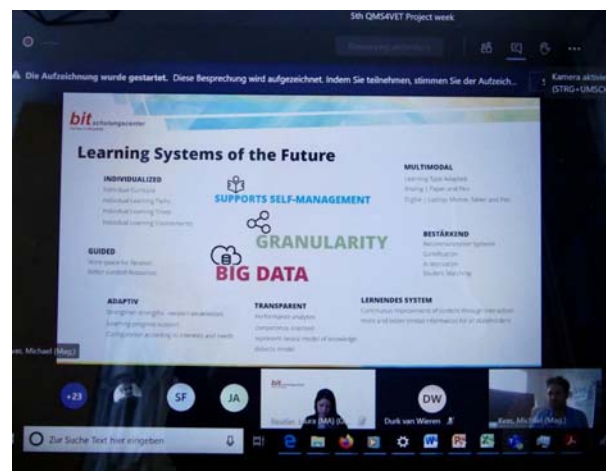
For the correct use of the platform as well as the tools, training is necessary from both the trainers/tutors and the students.

Trainer/Tutor:

As teaching in a blended learning setting is different, good training for the trainers is needed not only in the learning materials and the LMS, but also in the possibilities, opportunities and challenges of this teaching methodology - further development and constant support are absolutely necessary. Possible development of own trainer working groups, which can work on problems independently with each other, is advantageous. Since a blended learning system is available 24/7, the hours during which the trainer/tutor is available should be determined in advance by the organization and the availability should also be clearly communicated to the participants. At the same time, constant communication between the trainer and the organization is needed to monitor and support motivation as well as any challenges.

Students:

The learner has the opportunity to work on learning material independently due to the individual approach. To ensure that students do not take advantage of the individual system, trainers should regularly check the students' learning progress on the LMS.



RECOMMENDATION FOR STEP BY STEP IMPLEMENTATION

The following recommendations can be used when implementation of all or parts of the bit schulungcenter **Blended learning system** is considered.

Financial aspect

1. Ensure there are sufficient funds for implementation.
2. Make sure that you have an economic market for your programme.
3. The programme should be actively marketed through external stakeholders and across social media to reach as wide an audience as possible to maximise uptake.

Organisational aspect

1. Evaluate in which courses a blended learning setting is needed and suitable. Define the right blend, percentage offline and online.
2. Clarify who is responsible for the content creation.
3. Consider how to include the practical element in blended learning when a profession has this as a requirement.
4. Ensure that you have both theoretical and practical exams to enrich the qualification and prepare the student for the workplace.

5. Collaborate with other schools to develop content. Build a win-win situation with companies to better meet their needs in writing content that can be used also for companies' employees (up-skilling and re-skilling)
6. Ensure that you have access to technical expertise required to implement and maintain programme.
7. Make sure that you have a compatible learning platform for students to access the programme.
8. Ensure that you have an electronic portfolio for students to upload assignments and other course material.
9. Ensure that you have feedback mechanisms in place so that students, staff and external organisations can support continuous improvement.
10. Maintain contact with regional employment and education public services to guarantee final certification of students and best employability opportunities.

Teachers aspect

1. Ensure commitment from teaching staff to adopt this learning approach.
2. Define working contract and rules for teachers and possibly adapt them to the blended learning setting.
3. Conduct a skills gap analysis of teaching staff and organise training of distance and blended learning for the staff. If the blended learning course goals include additional elements such as social skills as well as practical and theoretical knowledge, then the teachers need to have special training in that field.
4. Ensure time is available for teaching staff to guide and support students in a digital environment.

Students or Learners aspect

1. Develop support and social forums for students to embed a group culture and sense of belonging.
2. Ensure that all students have devices and Internet connections to access the course content – equity for all.
3. Consider how students with accessibility needs for example dyslexia can access the course.
4. Develop induction manual for students to provide programme information.
5. Offer step-up programmes to improve digital and language skills for students.



EVALUATION

After analysing the **blended learning system** of bit schulungcenter the following conclusions can be drawn:

Advantages:

The blended learning setting is consistent with the EQR (European Qualifications Framework) with a strong focus on a personalised study path and fully flexible adaptation to personal life in order to develop the skills for the profession the learner is studying.

The student is in control of their whole life-long learning journey, being able to progress at a pace that meets the individual needs so that the student becomes a more active learner. By adopting a cloud based and easy-to-use platform such as LMS MILES, the educators as well as the learners have the flexibility to control all learning process anytime and anywhere (web, phones, tablets), which creates an enrichment of the learning process.

Additionally, the educator can see the learner's progress in real time via the Learning Management System (LMS) MILES and therefore can adjust the learner's path with guidance and mentoring.

Disadvantages:

As the blended learning system presented is closely connected to the Austrian labour market service as well as the Austrian legislation, it is sensitive to any governmental or legal changes which are out of the organizational control.

It is not possible to deliver the blended learning course without an adequate and up to date LMS in place to enable effective course delivery, monitoring of student's progress, guidance and tutoring.

The course is not equitable for all as there is a need to have devices, internet access and additional learning needs e.g. dyslexia also need to be addressed.

Where the content is constantly changing and evolving there is a cost and time implication for this and this is also a consideration regarding the requirement to manually amend individual progress into the online LMS when they fast track through a course.

Due to the requirements of the blended learning approach including, for example, IT-skills or practical knowledge, a knowledge-base is required both from learners and educators in advance of commencing study or teaching.

Tips for implementation:

The Austrian approach is closely based on the Austrian labour market service and governmental restrictions, therefore an organization wanting to implement the blended learning setting needs to analyse the (inter)national legislation and basic principles of the respective work environment.

Within the organization it is critical to identify and address skill-gaps (course content creation, delivering blended learning, commitment of educators) in advance of implementation.

To ensure that the implementation of the blended learning system is successful, there must be understanding and knowledge around educational delivery within the organisation. This will ensure that materials and resources are created which can guide an individual learner through their learning path.

Annexes

11. Agenda and Minutes 5th QMS4VET project week
12. bit schulungcenter presentations