



MCAST

Malta College of Arts, Science & Technology

PD7-E17-20
MQF Level 7

**MCAST Masters in Vocational Education
Applied Research 4.0**

Course Description

The 4th Industrial Revolution heralds a series of social, political, cultural and economic impacts that will unfold over the 21st century. This calls the education community to action to be among the key players of shaping the developments and growth in the educational curricula ensuring that our students will graduate into a world they can help shape with wisdom and skill.

The *Master in Vocational Education Applied Research 4.0* is a proactive response shifting from the traditional education programmes to innovative practices linking teaching and action research based on the Scholarship of Teaching within the context of vocational education in Further and Higher Education. It is designed to offer an experiential learning experience in vocational education through the interlinked fields of competence-based and research-based development field.

This study programme is intended for teachers and other professionals who are involved and concerned in education within a vocational context. The first year of the journey provides pedagogical training for those who have not yet acquired an initial teacher qualification. However, the course goes beyond an initial stage of training.

The journey seeks to provide an experiential experience to VET professionals bridging the two contexts of education and industry, both of which influence and determine the nature and scope of a vocational education entity. Thus, throughout this Study Journey the participant is provided with opportunities not only to extend one's knowledge and thinking but also to enhance personal and professional growth within the area of one's expertise striving towards the 4th Industrial Revolution.

Through blending team delivery, team learning with work experience, team assessment and action research the programme strives to address the underlying foundations for the 4th Industrial Revolution: human communication, critical thinking and engagement with digital technologies. The programme delivery mode in each of the first two years uses a blended learning approach scheduled as: Weekend Schools and Online Learning, each Weekend School covering a set of area disciplines focussing on one overarching theme.

Programme Learning Outcomes

At the end of the programme the student will have:

1. A systematic understanding of knowledge and a critical awareness of the disciplinary-based perspectives of the field of education in general and Further and Higher Vocational Education;

2. A comprehensive understanding of techniques applicable to the teaching profession within the context of Vocational, Further and Higher Education environment;
3. An originality in the application of knowledge showing how established, researched and newly discovered techniques can be used to advance their knowledge and understanding as well as further develop their teaching-learning skills to propose new innovative effective high level approaches reflecting the challenges of the 4th Industrial Revolution;
4. A conceptual understanding that enables the learner:
 - To evaluate critically current education research and advanced studies on the scholarship of teaching and learning with special focus on the requirements of the emerging *Vocational Education 4.0* ;
 - To evaluate and critique methodologies through grounded research cycles in vocational contexts;
 - To propose new hypothesis / models promoting the scholarship of teaching and learning.

Entry Requirements

The Master in Vocational Education Applied Research 4.0 follows Course Admissions of the MCAST Degree Regulations.

These Specific Course Regulations apply only to the Master Degree in Vocational Education Applied Research 4.0 and sub-awards thereof (see below) commencing as from academic year 2019:

- a) MQF / EQF Level 7 *Postgraduate Award in Vocational Education Applied Research 4.0* (15 ECTS)
- b) MQF / EQF Level 7 *Postgraduate Certificate in Vocational Education Applied Research 4.0* (45 ECTS)
- c) MQF / EQF Level 7 *Postgraduate Diploma in Vocational Education Applied Research 4.0* (90 ECTS)
- d) MQF / EQF Level 7 *Masters in Vocational Education Applied Research 4.0* (120 ECTS)

These Specific Course Regulations are equally applicable to Students, Lecturing and Administrative staff within the College, Institute and Corporate functions.

In order to be eligible for admission to the below mentioned courses candidates must meet the following entry requirements:

- ***Postgraduate Award in Vocational Education Applied Research 4.0 (15 Credits)***

And

- ***Postgraduate Certificate in Vocational Education Applied Research 4.0 (45 Credits)***
 - a) Be a full-time academic member of staff at the Malta College of Arts, Science and technology;

Or

- b) Be a full-time academic member of staff in another vocational education institution;

Or

- c) Be in possession of a Bachelor's Degree in the relevant subject area.

All applicants must be practicing in the teaching profession in a Vocational Education entity for Further and/or Higher Education to a minimum of 4 hours per week for the duration of qualification.

All eligible candidates shall follow the *Postgraduate Certificate in Vocational Education Applied Research 4.0* unless they are already in possession of another teaching qualification recognised by the Board towards Recognition of Prior Learning (RPL) in which case such candidates will register for the *Award in Vocational Education Applied Research 4.0*.

Candidates in possession of alternative qualifications will have their application validated by the Admissions Board.

- ***Postgraduate Diploma in Vocational Education Applied Research 4.0 (90 Credits)***

Candidates must have successfully completed either of the following qualifications:

- a) the MCAST Postgraduate Certificate in Vocational Education Applied Research 4.0 (45 ECTS at Level 7)

or

- b) The MCAST Award in Vocational Education Applied Research 4.0 (15 ECTS at Level 7) and the MCAST Graduate Teaching Certificate in Vocational Education and Training

Or

- c) The MCAST Award in Vocational Education Applied Research 4.0 (15 ECTS at Level 7) and the MCAST Postgraduate Certificate in Vocational Education and Training
Or
 - d) The MCAST Award in Vocational Education Applied Research 4.0 (15 ECTS at Level 7) and the Postgraduate Certificate in Education offered by the University of Malta
Or
 - e) The MCAST Award in Vocational Education Applied Research 4.0 (15 ECTS at Level 7) and a Bachelor of Education offered by the University of Malta.
Or
 - f) Candidates in possession of alternative comparable qualifications at Level 6 or higher and a minimum of 30 ECTS will have their application validated by the Admission Board but must be in any case in possession of the MCAST Award in Vocational Education (15 ECTS at Level 7).
- ***Master in Vocational Education Applied Research 4.0***

Candidates must have successfully completed the MCAST Postgraduate Diploma in Vocational Education.

Current Approved Programme Structure

| Weekend Title | Unit Titles | ECTS |
|--|--|------|
| Year 1 | | |
| Contemporary Debates in Education: Educating for the fourth and future industrial revolutions | The Reflective Professional: Creating Knowledge in Action - 6 ECTS | 15 |
| | Educational Psychology 4.0: harnessing the potential of all - 6 ECTS | |
| | Andragogy in Practice in a Work-Based Learning Context - 3 ECTS | |
| Social Justice and Education: Robotising Humanity vs Empowering Humanity | Social Inclusion and Equity in Education for the 4th Industrial Revolution- 6 ECTS | 15 |
| | Engaging with Digital Education toward Industry 4.0 - 6 ECTS | |
| | Mentoring the Self: Emotional and Social Intelligence: 3 ECTS | |
| Vocational Learning Experiences Teaching and Learning in Industrial Contexts | Teaching, Learning and Assessment in Further and Higher Vocational Education: 12 Credits | 15 |
| | Area Specialisation Part 1: 3 Credits | |
| Year 2 | | |
| Leading Change in Vocational Education 4.0 | Policy and Practices in Education for the 21st Century - 6 ECTS | 15 |
| | Group Project in a Work-Place Environment - 6 ECTS | |
| | Andragogy in Practice in an Industrial Context- 3 ECTS | |
| Timeliness, Flexibility and Innovation: Responding to the 4th Industrial Revolution | The Contribution of a Dynamic Vocational Curriculum to the Process of Education: 6 ECTS | 15 |
| | Building Quality Teaching and Learning supported by a Quality Management System - 6 ECTS | |
| | Area Specialisation Part 2: 3 ECTS | |
| Processes of Grounded Educational Research in Vocational, Further and Higher Education | Fundamentals of Research for Innovation in Vocational Education 4.0- 6 ECTS | 15 |
| | Teaching for Employability - 6 ECTS | |

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|---------------------|--|-----|
| | Mentoring beyond the Classroom: Continuous and Professional Growth - 3 ECTS | |
| Year 3 | | |
| Dissertation | / | 30 |
| | Total | 150 |

MVEAR 4.0 Weekend Theme 1: Contemporary Debates in Education: Educating for the fourth and future industrial revolutions

Type: Theory Practice Theory and Practice Placement

Credits: 15

**The Reflective
Professional: Creating
Knowledge in Action**

Credits: 6

**Educational Psychology
4.0: Harnessing the
potential of all**

Credits: 6

**Andragogy in Practice in
a Work-Based Learning
Context**

Credits: 3

Description

Education is, at its core, a normative social enterprise driven by fundamental social values together with imperatives of social justice, which shape educational theory, policy and practice. Being intentional, purposeful, and value driven, education involves, for all stakeholders, choices about a way of life. Education is an institutionalized human practice, hence a form of governance with consequential choices influencing educational purposes and goals, curriculum, pedagogy, organization and governance, and therefore require ethical and political justification.

It is also true that behind every educational institution and every teacher there is a set of beliefs, a philosophy of education, that influences how learners are taught. A philosophy of education represents answers to questions about the purpose of schooling, a teacher's role, what should be taught, how and to whom.

Various are the satisfactions that accompany the teaching profession today - witnessing and supporting the growth of young people; the challenge of designing effective teaching for a diversity of learners; and lifelong learning. However, how these satisfactions are perceived by teachers is determined by four main trends: increased diversity of learners from multiculturalism to a multiplicity of learners' abilities and needs; the spread of instructional tools and technological resources present in educational institutions; an expected professionalism among teachers; and increased demands for accountability in education.

Each of the mentioned trends can provide new opportunities for learners and teachers. However constant changes and new demands often raise new issues. An understanding of Psychology in Education can help teachers in making

Andragogy in practice forms an integral part of the programme and is mandatory.

This module primarily focuses on the teaching performance using basic andragogical skills and techniques addressing a work-based learning environment. Thus, this module goes beyond the application of basic teaching skills and techniques. It focuses on the use of andragogical skills to train learners in collaborative practice, problem-solving and development of an entrepreneurial mind-set. At the same time it also offers an opportunity to the participant to apply what was learnt, planned and prepared to be delivered in class, workshops, laboratories and other work-based learning contexts.

Andragogy in Practice shall take a critical friend approach and is intended to continuously improve one's practice through the guidance of an assigned mentor. Thus the Teaching Observation Visits are intended

On the doorstep of the 4th industrial revolution, and in the context of a Vocational, Further and Higher Educational Institution, such questions are not only pertinent but critical.

Self-determination demands that there should be deep reflection and rational deliberation on social values and imperatives of justice that inform the purposes and practices of education. Taking a philosophical approach constitutes a mode of inquiry and a discipline that enriches the capacity for reflection and rational deliberation in the study and practice of education in a 21st century democratic society.

constructive use of new trends, to draw benefits while dealing with the uncertainties that accompany them. Psychology in education is for educators a source of information, advice, and useful perspectives concerning learners; instruction and assessment; and the psychological and social awareness of teachers in the 21st century. Hence, through this module the learners will delve into the areas of teaching and teachers' challenges and perspectives on learning in contemporary society; major theories of learning; understanding learners and learner diversity in a post-16 vocational context; inclusion; learner motivation and empowerment; classroom management and the classroom environment; facilitating complex thinking; learner-driven models of learning; assessment strategies; Action research to study self and learners.

primarily to give support to the participants, while at the same time providing them with an opportunity to reflect and self-evaluate their overall performance and practices. Moreover, these visits should help the participants identify both areas of competence and areas that need improvement.

One basic focus aims to assist learners to develop an assessment methodology as an integral part of the teaching methodology. Thus, the teacher-participant is expected to explore different methods and approaches which include the active learning, collaborative learning and inductive teaching and learning, these being implemented in different learning environments. At the same time using diverse assessment modes and methods the teacher-learner evaluates the effectiveness of chosen teaching methods and skills on the learning of own learners. Interaction with learners and class management are two other areas which are crucial during the assessment of the performance of the teacher-learner.

This Module also provides an experiential learning experience where the participant builds own Portfolio documenting, an on-going professional growth within the field of Vocational Education 4.0. It also aims to invite peers and mentors to share comments and teaching experiences, providing space where peers can build on the contributions of others. This is considered a step towards a more public and professional view of teaching as a scholarly activity.

Learning Outcomes

Upon completing the theme, learners should be able to:

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| <p><i>LO1. Demonstrate knowledge and understanding of key concepts in philosophy.</i></p> <p><i>LO2. Demonstrate knowledge and understanding of key concepts in the philosophy of education.</i></p> <p><i>LO3. Demonstrate capacity to critically analyse problems.</i></p> <p><i>LO4. Develop sophisticated arguments using academic evidence.</i></p> | <p><i>LO1. Demonstrate knowledge and understanding of key concepts in psychology of education.</i></p> <p><i>LO2. Demonstrate knowledge and understanding of key issues in Special Education.</i></p> <p><i>LO3. Demonstrate capacity to critically analyse problems observed in own educational institution from a psychological perspective.</i></p> <p><i>LO4. Develop sophisticated arguments using academic evidence from the area of educational psychology;</i></p> <p><i>LO5. Contribute to the development of innovative and inclusive teaching and learning practices within vocational, further and higher education.</i></p> | <p><i>LO1. Demonstrate a professional and effective teaching performance in the implementation of contrasting teaching approaches in different learning environments applicable to the sector context of the subject area.</i></p> <p><i>LO2. Demonstrate a professional ability in using a teaching approach, addressing the training of learners in developing transversal skills required in employment.</i></p> <p><i>LO3. Demonstrate an improvement in teaching performance responding to personal reflection and feedback from learners, peers and tutors.</i></p> |
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MVEAR 4.0 Weekend Theme 2: Social Justice and Education: Robotizing Humanity vs Empowering Humanity

Type: Theory Practice Theory and Practice Placement

Credits: 15

Social Inclusion and Equity in Education for the 4th Industrial Revolution

Credits: 6

Engaging with Digital Education toward Industry 4.0

Credits: 6

Mentoring the Self: Emotional and Social Intelligence

Credits: 3

Description

Social Inclusion and Equity in Education for the 4th Industrial Revolution concerns studies the relations between education and society at local and global levels. It is concerned with educational aims, methods, institutions, administration and curricula in relation to the economic, political, religious, social and cultural forces of the society in which they function. As far as the education of the individual is concerned, social inclusion and equity in education highlights the influence of formal and informal social life and social relationships

Learners learn in many ways. With the proliferation of technology, today’s learners have become more tech-savvy and are able to use technology more effectively than previous generations. Inevitably teaching and learning skills and techniques are also changing with the proliferation of such new technologies and new learning environments such as eLearning and mobile learning.

This module has been developed to help participants understand and evaluate the benefits and challenges that the use of

This unit is compulsory and provides an opportunity for participants to understand the importance of mentoring learners within the learning process. Academic progress is affected by the general well-being of the learner, hence it is crucial for education institutions to take a holistic approach so that learners develop both on a personal and an academic level. The unit enables participants to develop mentoring skills to facilitate learners’ ability to optimize their educational experience and socialization into their chosen field of study. Participants will then

on the development of personality putting emphasis on the need for empowering learners with a more critical and socially impactful approach.

This module offers a critical perspective on the organization of education and how it is delivered; the values and power relationships that underpin it; and the outcomes it produces. Learners will be introduced to a variety of sociology of education theories, which will give learners that critical edge necessary to evaluate education systems, processes and practices. Learners will explore issues and debates relating to the (re)production of inequalities (in relation to educational attainment, access and progression; issues of social class, gender, race and disability) and the factors that shape them.

The module examines the processes and structures in different sectors, such as general, vocational, and higher education, and in relation to lifelong learning, and the impact these have on learners from different social groups. Policy initiatives, such as those in relation to inclusion and education for all shall be explored from a macro-perspective (including the political and economic conditions that have shaped policy), the ‘meso level’ (the level of educational institutions) and at the

modern technology as a pedagogical tool may present.

The application of new technologies aims to cultivate motivation and independence in the learner while at the same time developing his/her creativity and critical thinking. The module investigates how new technology can be used to facilitate and enhance teaching and learning while taking into account different learning styles.

In a world constantly changing at exponential speed, lifelong learning has become fundamental to ensure employability and professional growth. Studying while in employment is becoming the norm, hence embracing technology can take learning to a new level by providing universal access to knowledge while challenging learners through collaborative learning and discussion. This however requires teachers to have a wider skills-set than in the past. While pedagogy remains a critically important part of teacher training, this module aims to equip candidates with the competences required in today’s world as we migrate more towards self-directed learning being more open, flexible and individual while the teacher takes more the role of an enabler or facilitator of learning rather than a source of knowledge and instruction.

explore how to evaluate learners’ social and emotional situations to facilitate personal growth and self-efficacy through a pastoral care approach. The last part of the unit highlights the need for educators to provide continuous feedback to administration to update policies if need be.

‘micro level’ (the level of the classroom and individual learners.

Whether digital content and technology are used to enhance classroom activity or whether these are used for blended or online course delivery, teachers need to learn how to manage content, online discussions and social interaction as well as identifying, using and at times even developing online learning tools to address the different learner needs in today’s fast-changing educational sphere.

Technology however presents its own challenges and modern teachers need to be able to discern the implications of using technology while critically evaluating literature, tools and systems available in order to harness the advantages, minimise disadvantages while becoming themselves contributors to knowledge to create a community of practice.

Learning Outcomes

Upon completing the theme, learners should be able to:

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| <p><i>LO1. Demonstrate knowledge and understanding of the theoretical underpinning between educational processes and systemic inequalities.</i></p> <p><i>LO2. Demonstrate capacity to critically evaluate a range of sociology of education perspectives and apply them to processes and practices in education.</i></p> <p><i>LO3. Process empirical and theoretical data, to develop sophisticated arguments having drawn on relevant theoretical perspectives.</i></p> <p><i>LO4. Contribute to the development of social equity and inclusive practices within a College environment.</i></p> | <p><i>LO1. Design digital learning resources to facilitate an effective and inclusive learning experience empowering the learner towards own learning.</i></p> <p><i>LO2. Moderate peer discussions through the use of technology and effective time management in a virtual environment.</i></p> <p><i>LO3. Critically investigate the impact of using technology-based tools and resources in teaching towards the development of self-directed learning.</i></p> <p><i>LO4. Contribute to the wider community through the use of technology in team collaboration.</i></p> | <p><i>LO1. Attend to learners' social and emotional situations to facilitate personal growth and self-efficacy, through a pastoral care approach.</i></p> <p><i>LO2. Develop mentoring skills focusing on facilitation of learners' ability to optimize their educational experiences and their socialization in chosen fields of study.</i></p> <p><i>LO3. Analyse current policies and legislations in education to make recommendations for improvement.</i></p> |
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MVEAR 4.0 Weekend Theme 3: Vocational Learning Experiences - Teaching and Learning in Industrial Contexts

Type: Theory Practice Theory and Practice Placement

Credits: 15

**Teaching, Learning and
Assessment in Further and Higher
Vocational Education**

Credits: 12

Area Specialisation - Part 1

Credits: 3

Description

This unit is compulsory to all participants and serves as an introduction to the delivery and assessment of units in a vocational institution for further and higher education. Participants will be introduced to important policy documents related to vocational education and training and they will be expected to critically examine these documents in view of the challenges of the 4th industrial revolution. Diversity has become the norm in the classroom, workshop or place of work and educators need to be equipped with the right knowledge, skills and competences to ensure that all learners are included and catered for. The unit provides an opportunity to participants to evaluate different approaches to delivery and assessment, both formative and summative, to address this challenging diversity.

This unit aims to focus on the application of andragogical skills and techniques in diverse sector areas of study which though not limited, include the following:

- Area 1: Applied Sciences;
- Area 2: Business Management and Commerce;
- Area 3: People Focus: Hair and Beauty, Care, Sports;
- Area 4: Creative Arts;
- Area 5: Engineering and Transport;
- Area 6: Information Technology and Communication;
- Area 7: Key Skills.

The unit considers the need for the teacher-learner to have a comprehensive knowledge of the industrial context applicable to the vocational study programme of the learners. In Year 1, this unit provides an opportunity for the teacher-learners to apply the pedagogical knowledge content in the planning and preparation of the learning

The unit emphasizes on the importance of reflection to improve own and peers' practices and to also contribute to the teaching community.

activities. Keeping in mind this course is aimed for teachers teaching in a vocational context, further and higher learning environment, this study unit allows space for design and development of lessons at different physical learning spaces such as on-campus e.g. classes and workshops and off-campus work-based learning settings as encountered during work-placements, apprenticeships and internships.

Assessment is a crucial aspect of a learning process. Understanding the curriculum framework and how to choose effective assessment methods and tools to reflect study areas within the industrial context, is vital in vocational education for the 21st century. During the implementation of this specialized unit, the teacher-learners are given an experiential learning opportunity to devise tools and techniques of planning for both formative and summative assessment within one's own specialisation area.

The unit offers an opportunity to the learners to develop a self-reflective approach to own teaching practice.

Learning Outcomes

Upon completing the theme, learners should be able to:

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| <p><i>L01. Critically examine policy documents related to education 4.0.</i></p> <p><i>L02. Evaluate different approaches to teaching, learning for supporting diverse learners within own subject area.</i></p> <p><i>L03. Develop effective learning experiences through principle of formative and summative assessment.</i></p> <p><i>L04. Critically examine the approaches and process of own teaching and learning environment.</i></p> | <p><i>L01. Demonstrate a comprehensive understanding of the real-world industrial context applicable to the vocational educational study area.</i></p> <p><i>L02. Demonstrate a systematic approach in planning and preparing inclusive effective teaching-learning activities based on researched pedagogical and andragogical techniques.</i></p> <p><i>L03. Prepare systematically to conduct formative and summative assessment of learning as an integral approach to teaching.</i></p> <p><i>L04. Develop a self-reflective approach to own teaching practice.</i></p> |
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MVEAR 4.0 Weekend Theme 4: Leading Change in Vocational Education 4.0

Type: Theory Practice Theory and Practice Placement

Credits: 15

**Policy and Practices
in Education for the
21st Century**

Credits: 6

**Group Project in a
Work-Place
Environment**

Credits: 6

**Andragogy in Practice
in an Industrial
Context**

Credits: 3

Description

“...policy is much more than a specific document or text. Rather, policy is both process and product. In such a conceptualization, policy involves the production of the text, the text itself, ongoing modifications to the text and processes of implementation into practice.”

Taylor *et.al.*
1997, p.24-25

The group project creates a ‘virtual’ operational environment bringing together teacher-participants from various sectors and disciplines into one integrated working team.

The purpose of this exercise is to develop the participant’s ability to self-reflect on own skills and performance in a team learning setting. The benefits of this exercise are the personal development of the participant and the group’s overall performance which is enhanced through the input of each participant to the team.

Each team member is given responsibility for the detailed design or improvement of a significant aspect of the

Professional development practice in industry allows teachers to spend a period of time with an employer, thus creating favourable circumstances for teachers to augment their professional knowledge, competences and expertise to their teaching work. Placement in industry offers an opportunity for the teachers to acquaint themselves with the industry’s work processes, ethos, methods, tools and materials specified in the qualification requirements of own vocational field. It provides an opportunity for the participant to engage in the practical application of content material of the course one teaches. Work placement empowers the teacher-participant’s confidence in

Policy is what is intended and what is put, or not, into practice. This is because policies always encounter organizational arrangements and already set practices. Hence, unless policy and practice are taken together policies remain incomplete, in so far that they have to be implemented within already rooted existing practices.

Educational practices are often driven by a framework laid out by public policies. This in turn is determined not only by political decisions at national level but also at a global level. By implication, globalization is not fixed in time and space but is fluid and changes with major world events. In fact, transnational organisations such as EU, OECD, PISA, UNESCO etc., are a constant influence in educational policy at the level of national systems as they hold countries accountable against set international indicators and benchmarks. This is even more so in the context of Vocational, Further and Higher Education, a strand often equated with the readdressing or reintegration of prospective human capital into employment, hence the economy.

Therefore, while national governments continue to own the authority to develop their own policies, this authority is affected by imperatives of the global economy, shifts in global political relations and changing patterns of global communication that are transforming people's sense of identity and belonging.

In the past two decades, global considerations have transformed the balance between economic efficiency and the social equity goals of education. The economic reframing of education policy has placed a bigger emphasis on policies of

institution operational environment (for example: developments in the curriculum and quality procedures). The team is required to run project meetings, produce proposals and detailed analysis of the proposal. Problem solving, and project coordination must be undertaken on a team and individual basis. At the end of the project, groups are required to report and present findings to a Board.

This element of the course is both realistic and engaging, and places the teacher-participant in a professional role as a VET teacher moving towards the 4th Industrial Revolution. The role of the VET teacher is no longer to work autonomously but rather to cooperate with other teachers to plan, coordinate and carry out teaching together.

The Institution may provide a list of possible Titles of Group Projects. However, each Group may submit own proposal.

providing concrete examples of real situations in the working life, thus boosting the teacher's capabilities and enhancing his/her teaching competences.

The period at work placement aims to provide an opportunity to the teacher-participant to examine their role as vocational teachers and to view the education community from the outside stimulating their reflections on their own teaching performance.

In turn, the learner benefits indirectly from the teacher's work placement. The teacher at the workplace provides on-the-job learning outcomes for the learner. Teachers having gone through the workplace experience can utilise their updated knowledge to address the established assessment criteria of the qualification with stronger relevance, through application of competences in working life.

The professional development practice provides the necessary tools, strengthening the teacher's ability to build learner proficiencies not only in content knowledge matter but also in the industry 4.0 skills with an emphasis on today's real-world industrial applications of creative thinking, problem solving and social interactions.

Andragogy in practice forms an integral part of the programme and is mandatory.

This Unit primarily focuses on the teaching performance using basic andragogical skills and techniques addressing a work-based learning environment. Thus, this Unit goes beyond the application of basic teaching skills and techniques. It focuses on the use of andragogical skills to train learners in collaborative practice, problem-solving and development of an entrepreneurial mind-set. At the

education as the production of human capital to ensure the competitiveness of the national economy in the global context.

In this module learners will be accompanied through debates revolving around the education 4.0 related to the conceptions of education policy; the globalization of education, the economy and marketization of education; the regime of performativity; accountability vs enterprise; automation vs humanisation; ‘fabrications’ in education; policy analysis; the role of teachers in policy design and policy implementation. Learners will be invited to *read* policy (text, decisions, debates and silences) in education with a *critical eye* and to draw their informed conclusions before making new proposals.

same time it also offers an opportunity to the participant to apply what was learnt, planned and prepared to be delivered in class, workshops, laboratories and other work-based learning contexts.

Andragogy in Practice shall take a critical friend approach and is intended to continuously improve one’s practice through the guidance of an assigned mentor. Thus the Teaching Observation Visits are intended primarily to give support to the participants, while at the same time providing them with an opportunity to reflect and self-evaluate their overall performance and practices. Moreover, these visits should help the participants identify both areas of competence and areas that need improvement.

One basic focus aims to assist learners to develop an assessment methodology as an integral part of the teaching methodology. Thus, the teacher-participant is expected to explore different methods and approaches which include the active learning, collaborative learning and inductive teaching and learning, these being implemented in different learning environments. At the same time using diverse assessment modes and methods the teacher-learner evaluates the effectiveness of chosen teaching methods and skills on the learning of own learners. Interaction with learners and class management are two other areas which are crucial during the assessment of the performance of the teacher-learner.

This Unit also provides an experiential learning experience where the participant builds own Portfolio documenting, an on-going professional growth within the field of Vocational Education 4.0. It also aims to invite peers and mentors to share comments

and teaching experiences, providing space where peers can build on the contributions of others. This is considered a step towards a more public and professional view of teaching as a scholarly activity.

Learning Outcomes

Upon completing the theme, learners should be able to:

| | | |
|--|---|---|
| <p><i>LO1. Demonstrate knowledge and understanding of education policy;</i></p> <p><i>LO2. Demonstrate knowledge and understanding of contemporary debates in education policy;</i></p> <p><i>LO3. Demonstrate capacity to critically analyse ‘texts’ within the education debate;</i></p> <p><i>LO4. Develop sophisticated arguments using academic evidence related to education policy and practice;</i></p> <p><i>LO5. Contribute to the development of innovative policies and practices within vocational, and further and higher education</i></p> | <p><i>LO1. Contribute to the scholarly community of the teaching profession in a real-life team project.</i></p> <p><i>LO2. Demonstrate independent learning through management of own project as required for continuing professional development.</i></p> <p><i>LO3. Apply transferrable skills required in team operations and working relationships.</i></p> | <p><i>LO 1. Analyse the professional development achievements of own knowledge and competences.</i></p> <p><i>LO 2. Present own experiences and development ideas to colleagues and learners.</i></p> <p><i>LO 3. Develop content and methods of teaching relevant for the present and future generations of learners toward employment.</i></p> |
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MVEAR 4.0 Weekend Theme 5: Timeliness, Flexibility and Innovation: Responding to the 4th Industrial Revolution

Type: Theory Practice Theory and Practice Placement

Credits: 15

The Contribution of a Dynamic Vocational Curriculum to the Process of Education

Credits: 6

Building Quality Teaching and Learning supported by a Quality Management System

Credits: 6

Area Specialisation - Part 2

Credits: 3

Description

As society evolves, curricula in all their guises must be responsive to arising changes. This unit explores debates around the purposes, nature and scope of the curriculum in contemporary society and equips all those with an interest in the field of vocational education, further and higher education with the knowledge, skills and competences necessary to accommodate the challenges and opportunities

Concepts such as quality control, quality assurance and quality management are often perceived as technocratic top-down approaches which frequently fail in higher education (Sursock, 2004). Ongoing research shows that over the years, initiatives have focused on the quality assuring of organizational processes. The emphasis should however be on change rather than on control, on development rather than

This unit aims to focus on the application of andragogical skills and techniques in diverse sector areas of study which though not limited, include the following:

Area 1: Applied Sciences

Area 2: Business Management and Commerce

Area 3: People Focus: Hair and Beauty, Care, Sports

Area 4: Creative Arts

that arise in the 21st century education.

Learners will be encouraged to relate the unit to their own field of interest, in particular post-16 vocational, further and higher education and training and community and work-based learning environments. Learners will be expected to critically engage in the active synthesis of theory and practice in contemporary education and analyse how the way in which the curriculum is led and managed, influences the processes of learning and teaching as well as educational outcomes learners' employability prospects. Learners will engage with a wide body of literature to explore the questions: What is a curriculum? What are the purposes of the curriculum? How are different curriculum models linked with these purposes? How does policy and leadership shape the way the curriculum is constructed and delivered? What influence does curriculum leadership have on learning?

This unit will help learners understand, analyse, debate and evaluate viewpoints, improving their research skills, as well as helping them to contribute ideas on what young people need to learn in 4.0 era, and most importantly, why.

on assurance, and on innovation rather than on compliance.

This unit takes into account the need for the teacher-learner to have a comprehensive knowledge of the various aspects of quality. This unit will help the participants move from debating regulations to a more holistic debate on organisational culture.

Another aspect of quality is the need for top-down and bottom-up interaction as the key to the development of quality culture.

It is recognised that in order to build trust, academic staff need to be better informed on the various aspects of quality and how quality management systems directly or indirectly impact on the input and output of their teaching and assessment processes.

For an organisation to function effectively, it has to determine, apply and manage numerous linked processes in order to produce the desired outcome.

Building trust through Quality Assurance facilitates the development of integration of these processes.

Area 5: Engineering and Transport

Area 6: Information Technology and Communication

Area 7: Key Skills

The unit takes into account the need for the teacher-learner to have a comprehensive knowledge of the industrial context applicable to the vocational study programme of the learners. The unit provides an opportunity for the teacher-learners to apply the pedagogical knowledge content in the planning and preparation of the learning activities. Keeping in mind this course is aimed for teachers teaching in a vocational , further and higher learning environment, this study unit allows space for design and development of lessons around different physical learning environments such as on-campus e.g. classes and workshops, and off-campus work-based learning settings, as encountered during work-placement, apprenticeships and internship.

This teacher education programme addresses training learners for employment focusing on subject area specialization of a specific industrial sector. This means that facilitating learning through the development of transversal skills of communication, team work, entrepreneurial mind-set and

problem solving is given utmost importance in this study unit.

Assessment is a crucial aspect of a learning process. Understanding the curriculum framework and how to choose effective assessment methods and tools to reflect industrial competences is vital in vocational education for the 21st century. During the implementation of this specialized unit, the teacher-learners are given an experiential learning opportunity to devise tools and techniques of planning for both formative and summative assessment within own specialisation area.

This unit goes beyond providing an opportunity for the teacher-learner to develop excellent teaching skills and abilities. The teacher-learner is required to undergo a scientific investigative study on the impact the learning activities have on the learners' learning, which study is peer-reviewed and shared with the community of learners: colleagues, non-academics and learners.

Learning Outcomes

Upon completing the theme, learners should be able to:

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| <p><i>LO 1. Critically review the rationale of a Curriculum within the context of a Vocational Education and Training Provider.</i></p> <p><i>LO 2. Evaluate the use of labour market intelligence to support the development of an academic plan for curriculum development.</i></p> <p><i>LO 3. Critically review curriculum models which help designers map out the rationale of a curriculum.</i></p> <p><i>LO 4. Assess the process of curriculum development and implementation to further improve the current curriculum framework.</i></p> <p><i>LO 5. Contribute to the development and disseminate of innovative curricula within College environment.</i></p> | <p><i>LO1. Engage with literature, legislation and policy documents on quality assurance.</i></p> <p><i>LO2. Explore the dimensions of quality in education within a vocational learning environment.</i></p> <p><i>LO3. Develop a systematic approach towards developing and enhancing Quality in own teaching-learning environment.</i></p> <p><i>LO4. Contribute to the wider scholarly community on the subject of quality teaching and learning.</i></p> | <p><i>LO1. Demonstrate a systematic approach in planning and preparing effective teaching-learning activities addressing work-related skills.</i></p> <p><i>LO2. Develop a critical and systematic approach to inquire into the impact of the teaching activities on the learning of the learner.</i></p> <p><i>LO3. Create a personal development plan to enhance own learning and quality teaching performance.</i></p> <p><i>LO4. Contribute towards the scholarly vocational teaching practices.</i></p> |
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MVEAR 4.0 Weekend Theme 6: Processes of Grounded Educational research in Vocational, Further and Higher education

Type: Theory Practice Theory and Practice Placement

Credits: 15

**Fundamentals of
Research for
Innovation in
Vocational Education
4.0**

Credits: 6

**Teaching for
Employability**

Credits: 6

**Mentoring beyond the
Classroom:
Continuous and
Professional Growth**

Credits: 3

Description

In research, methodology aims to recommend methods and procedures that should be used in the generation of valid knowledge. Methodology is often defined as a discipline whose function is to examine the rationale, the philosophy to justify the selection of the methodology, and methods of data collection used in the production of valid knowledge.

This unit aims to provide learners with the opportunity to experience research in action, as they collaborate together to frame their research questions within the most adequate methodology; and then to select the appropriate methods of data collection for their

Employability is a term which is used in different contexts and settings. Yorke (2004) defines employability as “*a set of achievements - skills, understandings and personal attributes - that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy*”. Given the pace of change, individuals, communities and societies are increasingly recognising that they cannot count on the current patterns of employment and labour market needs to address the future needs of the 4th industrial revolution. The rationale for transferrable

This unit follows *Mentoring the Self: Emotional and Social Intelligence* and focuses on the opportunity for participants to understand the importance of mentoring learners within the learning process. Academic progress is affected by the general well-being of the learner, hence it is crucial for education institutions to take a holistic approach so that learners develop both on a personal and an academic level. The unit enables participants to develop mentoring skills to facilitate learners’ ability to optimize their educational experience and socialization into their chosen field of study. The approach taken is experiential

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research study. It explores and examines methodological principles helping them make their methodological preconceptions more explicit and open to critical reflection. It aims to enable research learners to develop a more reflective and critical approach to their research, engaging them in a continuous enabling reflective process leading to a solid justification of their chosen research methodology and methods.

This unit addresses the task of planning and conducting a master research thesis. It aims to help the research learner develop a clear sense of direction early on in the development of research, supporting them in organising, planning, monitoring and reporting their research findings.

The supervisory approach is that of mentoring and facilitating the development of the learner as researcher. The supervisor is available to help the learner at every stage, from formulation of the research questions through establishing methodologies, choosing appropriate methods of data collection, analysis of findings, discussing results, writing research report to presentation and possible publication of thesis.

While the supervisors help to improve the quality of the thesis and the educational experiences, they must also ensure that their learners' work meets the College established standards and the corresponding academic discipline.

The unit also provides a learning opportunity to delve deeper on ethical issues and

employability skills is based on the essential requirement for individuals to think critically, communicate effectively, solve problems creatively, work in a team (Teamwork), and develop adaptability and learning to learn. Within this context, the aim of this unit is to develop essential competences for VET teachers in order to think critically and apply effective teaching strategies in the field of employability for the 21st century.

in nature and learners are expected to, set up groups support structures to support each other along their studies; and to conduct peer-to-peer mentoring sessions as part of their weekend schools, providing constructive feedback in the context them conducting their own research study.

Participants will then explore how collegial support in the form of mentoring and a critical friend approach can benefit both the individual and the institution securing, the dissemination and upholding of a common vision; the enhancement of a sense of belonging; and the development of a community of practice. This unit highlights the idea of succeeding together; the notion of supporting and mentoring others as an opportunity for personal and professional growth.

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political complexities as key aspects in educational research.

One key area of this unit is that through an experiential approach, the participants will, in turn, develop competences that empower them in assisting their own learners in their research process.

Learning Outcomes

Upon completing the theme, learners should be able to:

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| <p><i>LO1. Engage with literature to evaluate research methodologies and methods ensuring appropriate choices for research question in context.</i></p> <p><i>LO2. Design a workable plan for the thesis.</i></p> <p><i>LO3. Demonstrate an understanding of ethical issues and political complexities in the production of knowledge through research.</i></p> <p><i>LO4. Assist in critiquing the research process of learners.</i></p> | <p><i>LO 1. Demonstrate a comprehensive understanding of the industrial sector in context.</i></p> <p><i>LO 2. Critique current developments in VET toward improving the relation between college-based learning and work-based learning.</i></p> <p><i>LO 3. Develop tools and techniques to promote an entrepreneurial teaching approach in fostering generic skills among learners.</i></p> <p><i>LO 4. Investigate the impact of work experience on the learning of the learner.</i></p> | <p><i>LO1. Understand the different intelligences and characteristics in an educational context.</i></p> <p><i>LO2. Develop different mentoring strategies to meet the different needs of learners.</i></p> <p><i>LO3. Mentor learners undertaking research activities, in the process of furthering their studies at a higher level and into employment.</i></p> |
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