

THE DESIGN OF WORK-RELATED TEACHING & LEARNING METHODS: CASE STUDIES AND METHODOLOGICAL RECOMMENDATIONS

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ABSTRACT: What kind of Work-Related activities/programmes do Italian teachers propose to their students? What are common elements considered in the designing of Work-Related activities by those proposing them? A multiple case study research programme was chosen as a method to explore the current Italian situation regarding Work-Related teaching and learning methods in Higher Education (Coll *et al.* 2008; Dirkx 2011) and to define some possible methodological recommendations to encourage the design of Work-Related Learning activities/programmes.

KEYWORDS: work-related learning, higher education, case study, university-business dialogue.

1. Introduction

The purpose of this paper is to explore and identify some possible methodological recommendations to encourage the design of work-related learning activities/programmes in higher education, to promote links between theoretical contents and the professional world. The research was grounded on the National Project *Employability and Competencies*, and began in 2013 with the aim of exploring current teaching and learning methods in the Italian higher education system (Boffo, Fedeli, Lo Presti, Melacarne, Vianello 2017).

1.1 The theoretical and methodological background

As for the theoretical and methodological background, the research is part of a scheme to modernize the European Higher Education system which emphasizes the need to enhance the quality of Tertiary Education through the involvement of the business world (European Commission 2011), and to encourage more interactive learning environments and partnerships with the job market (Commission of the European Communities 2006, 2009).

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This European focus on university–business cooperation and teaching and learning methods to link education and work, refer to what is called in North American literature *Work-Related Learning* (Dirkx 2011) and in Australian literature as *Work-Integrated Learning* (Cooper, Orrell, Bowden 2010; Gardner, Barktus 2014). Both terms concern the integration between formal and professional contexts, to create meaningful benefits for students, organizations, and other stakeholders (Gardner, Barktus 2014).

A previous literature review (Frison, Fedeli, Taylor 2015) allowed the research group to clarify terms, theoretical orientations, and practical implications regarding *Work-Related Learning*. On the one hand, the term refers to a period spent in a professional environment with different purposes and objectives such as study, the development of generic or technical skills, and the exploration of possible career options and job opportunities (Coll, Eames, Paku, Lay 2008). On the other hand, it is more widely related to «a complex educational phenomenon. It is at once a set of educational missions (e.g. careers education), a range of activities (work experience), a collection of topics (understanding credit and work) and a repertoire of teaching and learning styles» (Huddleston, Stanley 2012: 11). Furthermore, adopting a broader definition offered by Dirkx (2011), *Work-Related Learning* (WRL) is defined as the process of learning that may occur «in educational preparation programs apart from the workplace, in formal and informal learning within the workplace, and in further education and professional development programs offered outside the workplace» (p. 294).

The definitions mentioned suggest a connection with the formal context and the strategies and opportunities of a link between education and the world of work developed in the educational setting. They allude to an open category that encompasses work-related programmes – for example internships – as well as didactic strategies to support students to better understand the relationships of theory–practice, education–profession (Litchfield, Frawley, Nettleton 2010).

Based on a literature overview and multiple definitions of Work-Related (or Integrated) Learning (Frison, Fedeli, Taylor 2015), the project *EMP&Co* – as it is informally called – carried out a first exploration of current WRL in Italy. A questionnaire was proposed to a convenience sample of Italian students enrolled in the 2014–2015 academic year, to explore how they perceive the use and competence of the teaching and learning methods proposed by their instructors (Fedeli, Frison, Grion 2017). Of the five areas of the survey, one was specifically devoted to work-related teaching and learning methods. The students' opinions referred to a scarce percentage of teachers who invite company speakers to classes or propose assignments or thesis

projects in direct cooperation with the professional world. Consequently, the EMP&Co survey revealed a university system cut off from the world of work and professions, as well as a very low level of connections among all disciplines even if strongly encouraged by the aforementioned European documents dedicated to the so-called «university-business dialogue» (Commission of the European Communities 2006, 2008, 2009).

1.2 Research design

Considering this general gap, to go more deeply into this topic, the research group became interested in mapping work-related activities/programmes proposed by Italian teachers in relation to their classes to:

- 1) identify common elements considered by those proposing,
- 2) trace methodological recommendations to encourage the design of work-related learning activities/programmes.

A multiple case study research design was chosen as a qualitative methodology (Basse 2003; Stake 2008), which allowed an in-depth understanding of the issues of interest. Indeed, as Yin states, the case study research design is more suitable when the goal is to provide and answer ‘how’ questions that aim to explain a certain phenomenon investigated in its real-life context (2009). Furthermore, case studies are a common methodological approach used in research into *Work-Related Learning* (WRL) because of the highly contextualized nature of these programmes (Coll, Chapman 2000).

Therefore, the research group has been researching and mapping multiple *instrumental cases* (Stake 1995; Yin 2009), such as cases selected to better understand the issue. To explore WRL, instrumental cases are different activities/programmes related to the academic courses that involve the professional world, to explore and analyse ‘how’ instructors propose and manage them, to identify the common elements taken in account, and to formulate possible methodological recommendations.

1.3 Instruments and procedure

Multiple sources of information are involved in the investigation of the selected cases (Creswell 2013; Yin 2009). First, semi-structured interviews were identified as an appropriate method to collect instructors’ practices and experiences related to WRL. Second, documents, reports, and papers relating to the selected activities/ programmes were analysed, when available.

Due to the ‘micro’ dimension of the WRL activities/programmes proposed in line with instructors’ personal interests and initiatives, a snowball technique was used to identify the cases (Morgan 2008). Indeed, snowball sampling is wholly suitable when cases or representatives of a population are difficult to locate, as in this case. A first small pool of instructors mentioned other cases according to the eligibility criteria (direct contact with the world of work, direct connection with a course or a study programme). The research group started from the University of Padua and from the educational area to then open to other disciplinary areas and universities (Siena and Florence, both involved in the aforementioned EMP&Co project).

Semi-structured interviews, audiotaped and transcribed, explored the following main themes and issues that emerged from the literature overview on WRL (Frison, Fedeli, Taylor 2015):

- Purpose of the activities/programmes;
- Integration: the process of bringing together formal learning and the world of work;
- Partnership: type of partnership between organizations and university;
- Support: type of support offered to students during WRL activities/programmes;
- Assessment: assessment forms and instruments;
- Learning: the “kind” of learning encouraged by WRL;
- Faculty needs to improve WRL.

1.4 Participants

As mentioned, a convenience group of instrumental cases provided a snapshot of possible WRL activities among a range of academic disciplines. So far, 3 universities have been involved in the exploratory study and 10 Faculties as shown below:

- University of Padua (7) from: Education (2), Chemical (1) and Industrial (1) Engineering (1), Mathematics (1), Psychology (1), Sociology (1)
- University of Siena (2) from: Education (1), Sociology (1)
- University of Florence (1) from: Education.

1.5 Themes and results

Several key stakeholders can be involved in WRL activities/programmes, such as faculties, academics, employers, professional accounting bodies, and the government (Abeysekera 2006) as well as, of course, students. Furthermore, there are several issues that need to be considered and clarified in relation to these stakeholders in order

to design successful WRL programmes (Abeysekera 2006; Cooper, Orrell, Bowden 2010).

1.6 Purpose of the activities/programmes and level of integration

The activities/programmes mapped can be divided into three main groups based on their work-related objectives and approaches (Fig. 1), from a *weaker* relationship with the world of work (Level 1) to a *stronger* and more direct one (Level 3):

Level 1

Problem-based or project-based activities strongly anchored in the theoretical contents of the course but with reference to real problems, contexts, cases, and real-life situations (2 cases) (Prince, Felder 2006). These activities are carried out in the classroom, and no direct relationship with the workplace is expected;

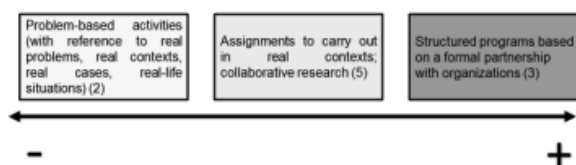
Level 2

Assignments to be carried out in real contexts (e.g. within the workplace) and *collaborative research* (5 cases) to develop research projects in cooperation with organizations and starting from real problems proposed by them (Frison 2016; Munari 2011);

Level 3

Structured programmes based on a formal partnership with organizations, such as workplace activities and programmes (3 cases) based on a longer period spent in the workplace, outside the formal academic setting.

Figure 1 – The ‘work-related’ content of the activities/programmes mapped.



The level of ‘integration’ of these activities may assume two different meanings. On the one hand, integration can be considered a process of intertwining theory and practice, theoretical contents, and professional issues (Cooper, Orrell, Bowden 2010; Litchfield, Frawley, Nettleton 2010). On the other, integration may be considered the process of recognizing work-related activities/programmes within the formal curriculum. In both cases, as Abeysekera (2006) stated, curriculum alignment is one of the key issues related to WRL. Since an important objective of these programmes is to increase students’ employability, the content of the curriculum should embrace em-

ployability skills (Duignan, 2002; Fallows, Steven 2000). To reach this goal, the course should encourage analysis and interpretation of theoretical concepts, proposing assignments and tasks that need to be solved with an incomplete set of information, as in real situations (Fallows, Steven 2000).

This aspect of the integration of work-related activities/programmes and their purposes is strictly linked to a further dimension, that of 'support'. The literature suggests that students require support before, during, and after their work-related experiences and this can acquire different forms. It may be simply administrative assistance or something more, such as educational support (Cooper, Orrell, Bowden 2010; Frison 2016; Martin *et al.* 2012; Munari 2011). In most of the cases mapped (7/10), the instructors provided a theoretical background related to their courses, but no dedicated support was offered. Despite this lack of official educational assistance, the instructors were willing to informally support students in facing organizational issues, when requested. Only in the 3 more structured work-related programmes based on a formal partnership with an organization, or more than one, was dedicated educational support expected and provided to deal with the challenges posed by professional contexts and dynamics.

1.7 Partnerships

It is not possible to have work-integrated learning without strong partnerships between industry and educational institutions, as Cooper, Orrell and Bowden (2010) underline. A partnership ensures the representation of different interests and the identification of strengths and issues, as well as the strategies to reach common goals together (Cooper, Orrell, Bowden, 2010). As the authors highlight, a partnership exists at the individual practitioner and institutional level and may be transitory or ongoing, formal or informal, and involve single or multiple workplaces (Cooper, Orrell, Bowden 2010).

As for the instrumental cases mapped, we can identify two main partnership dimensions:

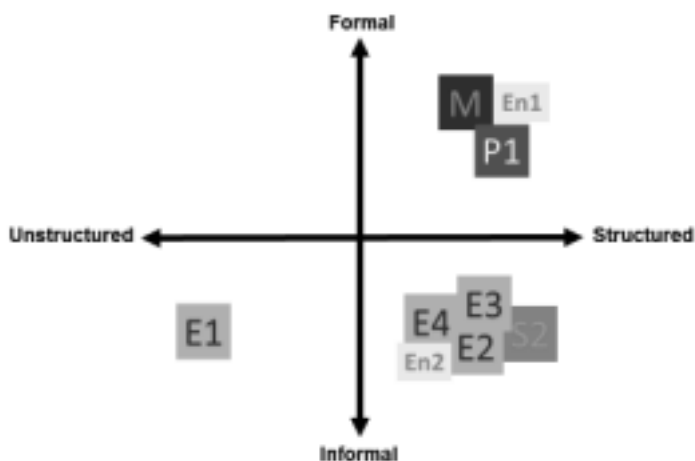
- 1) formal vs. informal;
- 2) structured vs. unstructured.

Indeed, the relationship between the university and organizations may be wholly informal, based on a direct and informal contact between the single instructor and the organizations' representatives, without an official agreement between the two institutional actors. Or else the university-organization relationship may be wholly formal, as in the case of programmes based on an institutional agreement (e.g. internships or work-experiences).

Additionally, the university-organization relationship may be formally structured, step by step, with planned phases and meetings, coherently arranged, and focused on timed objectives. If not, it may be unstructured, based on informal meetings according to the instructors' openness and willingness.

With regard to these two coordinates, the 10 cases explored are located as shown below (fig. 2). In only one case (Education area), is the partnership wholly informal and unstructured. This is the case of a problem-based learning activity proposed to the students during a methodology of educational research course. Most of the mapped cases (5) are based on an informal relationship between the instructor of reference and the organization/s involved. In any case, the instructor provides the students with a clear pathway to cover, made up of agreed phases and milestones to reach common objectives. The Mathematics, Psychology, and Engineering cases (3) present a strongly formal and structured partnership based on an institutional agreement between the university and the organization/s. In this case, the work-related activities refer to formal projects that involved students from the whole university (Industrial Engineering and Psychology) and the students attending a study course directly linked to the internship experience, within a Bachelor's Degree study programme (Mathematics). In every case, this institutional relationship was led by a teacher who oversaw the project as coordinator and took care of the organizations' requests as well as the students' needs.

Figure 2 – University/organizations partnership formality and structure.



E = Education; En = Engineering; M = Mathematics; P = Psychology; S = Sociology

1.8 Assessment

The concept of integration mentioned above refers to another crucial dimension of WRL: the assessment of these activities and their recognition in terms of grades or credits (Abeysekera 2015; Cooper, Orrell, Bowden 2010) based on the formal recognition of learning through practice. As Abeysekera points out, «academics could work with practitioners to jointly design learning outcomes and assessment techniques acceptable to both parties» (2015: 82), as well as being useful to students to understand their level of skills and competencies, beyond knowledge. Furthermore, as Martin and colleagues underline, these programmes encourage the combined use of both formative and summative assessment (2012). «Informal formative approaches are varied, ranging from the use of technologies such as emails, blogs and other e-journals, through to the use of more formal approaches such as reflective journals. Summative assessment provides a meaningful opportunity to assess, in particular, report writing and oral presentations both of which can be learning outcomes» (Martin *et al.*: 32).

Considering the cases analysed, only one bases the final grade of the study course completely on the assessment of work-related activity: a final group project report. (1) In the other instrumental cases, the final grade is the result of integration between an assessment of work-related experiences (through reports and/or oral presentations) and traditional exams (6). Sometimes neither form of assessment nor integration is expected for work-related activities (3), and the final grade is based only on traditional oral or written exams.

1.9 Learning

The literature analysed focuses on the experiential (Kolb 1984) and situated (Lave, Wenger 1990) dimensions of work-related learning. Indeed, the students learn through experiential learning in the workplace, by doing and interacting with professionals facing genuine professional problems and situations, where theoretical knowledge can be put into practice.

In the cases mapped, according to the faculty's perspectives, what kind of learning is encouraged by work-related experiences? The interviewees mentioned:

- emotional, experiential, inductive learning;
- learning of soft skills (team-working, problem-solving, public speaking, negotiation, leadership);
- learning on the job, situated learning;
- self-directed learning;
- multilevel learning (reflective, metacognitive, emotional, organizational, scientific);

- opportunity for self-awareness and awareness of the world.

Work-related activities/programmes can become a learning opportunity for teachers, too. In accordance with the literature, through WRL teachers can establish links with a wide range of employers and, through this, can ensure that their teaching is up to date (Fraser, Deane 2002).

Indeed, the interviewees underlined that for them the projects were an opportunity:

- to learn about business needs and new research topics, and for dialogue and exchange
- to strengthen relationships with organizations;
- to re-think teaching and learning methods and design;
- to change the role of instructor as Charon, as a guide;
- to design experiential didactics;
- to have fun and interact with other students.

1.10 Faculty needs

As the literature underlines, academics are the stakeholder most involved in designing WR activities/programmes (Abeysekera 2006; Reeders 2000). An Australian survey refers to the contents of training provided to academics on this topic, such as policy formulation, programme design, the preparation of students, sourcing of positions, assessment, student supervision, student mentoring, industry relationship, and programme evaluation (Reeders 2000).

As for the needs pointed out by the interviewees, they underlined difficulties related to the assessment of WR activities. They would ask for strategies and tools to assess students and to go beyond a traditional assessment form focused on knowledge rather than on skills and competencies. The connection between these activities contextualized to the workplace and the study course still remains the first challenge to face with. This challenge is strictly related to an effort to define intended learning outcomes, the choice of teaching and learning methods to achieve them, and the assessment strategies and tools necessary. Finally, interviewees highlight the need to receive support from the institution to manage relations with the organization, to create a wider network of available organizations and move from a personal initiative to an institutional strategy of partnership with the world of work.

2. Discussion and conclusion

The challenge of enhancing WRL in Higher Education is a conundrum that has been well detailed by European documents (Com-

mission of the European Communities 2006, 2008, 2009) and the international literature (Cooper, Orrell, Bowden 2010; Gardner, Barktus 2014; Dirkx 2011; Frison, Fedeli, Taylor 2015). Beyond that starting point, this exploratory study has begun to reveal strengths and weaknesses in the proposal, design, and management of work-related activities/programmes.

Firstly, support appears to be a crucial issue. WR activities should provide time and space for support, a sort of ‘help service’ that welcomes administrative and organizational problems, offering the students a ‘learning guide’ to cope with critical situations. Reflective spaces and tools, monitoring meetings, and peer-tutoring meetings have this goal, and the challenge is to make them compulsory and sustainable for both the students and the faculty.

Secondly, the change of attitude of the instructor from *sage on the stage* to *guide on the side* (Morrison 2014) is another central element. WR activities relate to an experiential and active learning process, where the students become more active. Based on WR activities/programmes, the instructors can bring into the classroom authentic research material and real problems, connecting these to theoretical contents, stimulating critical thinking and creative solutions, proposing simulations that can reproduce real-life and work contexts.

This point relates to a third dimension, that of recognizing learning through practice and its assessment, which are two crucial aspects of WR strategies to consider part of the curriculum, the formal one – as an academic plan – and the hidden one – referring to norms, values, and beliefs embedded in the curriculum, classroom life, and in the faculty’s approach (Reeders 2000).

Finally, the faculty’s approach to WRL and dedicated teaching methods is strongly bund up with the support offered to instructors to foster WR strategies, in terms of specific training to design WR activities/programmes or administrative services to assist them in the management phase. The cases mapped are based on a personal instructor’s choice to encourage connection to the professional world. The challenge, as mentioned above, is to move from an individual choice to an academic strategy that recognizes and encourages learning in and through the workplace.

References

- Abeyssekera I. 2006, *Issues Relating to Designing a Work-integrated Learning Program in Accounting*, «Asia-Pacific Journal of Cooperative Education», VII (1), 7-15.

- Boffo V., Fedeli M., Lo Presti F., Melacarne C. and Vianello, M. (eds.) 2017, *Teaching and Learning for Employability: New Strategies in Higher Education*, Pearson, Milan-Turin.
- Commission of the European Communities 2006, *Delivering on the modernization agenda for universities: education, research, and innovation*, <http://w3.unisa.edu.au/rqie/docs/comm2006_0208_delivering_on_the_modernization_agenda_for_universities-1.pdf> (01/2018).
- Commission of the European Communities 2009, *A new partnership for the modernization of universities: the EU Forum for University Business Dialogue*, <http://ec.europa.eu/dgs/education_culture/more_info/evaluations/docs/education/business_en.pdf> (01/2018).
- Cook-Sather A. 2002, *Authorizing Students' Perspectives: Toward Trust, Dialogue, and Change in Education*, «Educational Researcher», XXXI (4), 3-14.
- Cooper L., Orrell J. & Bowden M. 2010, *Work integrated learning: A guide to effective practice*, Routledge, London.
- Cranton P. 2006, *Fostering authentic relationships in the transformative classroom*. «New Directions for Adult and Further education», 109, 5-13.
- Creswell J. W. 2013, *Research design: Qualitative, Quantitative, and Mixed Method Approaches*, Sage.
- Czerniawski G. and Kidd W. (eds.) 2011, *The Student Voice Handbook. Bridging the Academic/Practitioner Divide*, Emerald, London.
- Dirkx J. M. 2011, *Work-Related Learning in the United States: Past Practices, Paradigm Shifts, and Policies of Partnerships*, in Malloch M., Cairns L., Evans K. and O'Connor B. N. (eds.), *The Sage Handbook of Workplace Learning*, Sage, Los Angeles, 293-306.
- Duignan J. 2002, *Undergraduate work placement and academic performance: Failing by doing*, in Goody A., Herrington J. and Northcote M. (eds.), *Proceedings of the Annual Higher Education Research and Development Society Conference*, 214-221.
- European Commission 2011, *Supporting growth and jobs – an agenda for the modernization of Europe's higher education systems*, <http://ec.europa.eu/education/library/policy/modernization_en.pdf> (01/2018).
- Fallows S. and Steven C. 2000, *Building employability skills into the higher education curriculum: a university-wide initiative*, «Education+Training», XLII (2), 75-82.
- Fedeli M. and Frison D. 2016, *Employability and Competences: verso una didattica partecipativa*, in Fedeli M., Grion V. & Frison D. (eds.), *Coinvolgere per apprendere. Metodi e tecniche partecipative per la formazione*, Pensa Multimedia, Lecce, 341-362.
- Fedeli M., Frison D. and Grion V. 2017, *Fostering Learner-Centred Teaching in Higher Education*, in Boffo V., Fedeli M., Lo Presti F., Melacarne C. & Vianello, M. (eds.) *Teaching and Learning for Employability: New Strategies in Higher Education*, Pearson, Milan-Turin, 89-121.
- Fraser S. and Deane E. 2002, *Getting bench scientists to the workbench*, in Fernandez A. (ed.), *Proceedings of the UniServe Science Scholarly Inquiry Symposium*, University of Sydney, Sydney, 38-43.

- Frison D. 2016, *Esperienza e apprendimento: verso una didattica work-related*, in Fedeli M., Grion V. & Frison D. (eds.), *Coinvolgere per apprendere. Metodi e tecniche partecipative per la formazione*, Pensa Multimedia, Lecce, 259-288.
- Frison D., Fedeli M. and Taylor E.W. 2015, *Work-related learning: a survey on teaching and learning methods in the Italian higher education system*. *ICERI 2015 Proceedings*, 8393-8401.
- Gardner P. and Bartkus K.R. 2014, *What's in a name? A reference guide to work education experiences*, «Asia-Pacific Journal of Cooperative Education», XV (1), 37-54.
- Hartley D. 2003, *New economy, new pedagogy?*, «Oxford Review of Education», XXIX (1), 81-94.
- Hartley D. 2007, *Personalization: The emerging 'revised' code of education?*, «Oxford Review of Education», XXXIII (5), 629-642.
- Huddleston P. and Stanley J. 2012, *Work-related teaching and learning. A guide for teachers and practitioners*, Routledge, Oxon.
- Jenkins J.M. and Keefe J.W. 2002, *Two schools: Two approaches to personalized learning*, «Phi Delta Kappan», LXXXIII (6), 449-456.
- Kolb D.A. 1984, *Experiential Learning: Experience as the source of learning and development*, Prentice Hill, Englewood Cliffs.
- Lave J. and Wenger E. 1990, *Situated learning: Legitimate peripheral participation*, Cambridge University Press, Cambridge.
- Litchfield A., Frawley J. and Nettleton S. 2010, *Contextualizing and integrating into the curriculum the learning and teaching of work-ready professional graduate attributes*, «Higher Education Research & Development», XXIX (5), 519-534.
- Martin A., Rees M., Edwards M. and Paku L.K. 2012, *An organization overview of pedagogical practice in work-integrated education*, «Asia-Pacific Journal of Cooperative Education», XIII (1), 23-37.
- Morgan D.L. 2008, *The SAGE Encyclopedia of Qualitative Research Methods*, Sage Publications, Inc.
- Morrison C.D. 2014, *From 'Sage on the Stage' to 'Guide on the Side': A Good Start*, «International Journal for the Scholarship of Teaching and Learning», VIII (1), 4.
- Munari A. 2011, *Morfogenesi e conoscenza*, in Amietta P.L., Fabbri D., Munari A. and Trupia P., *I destini cresciuti. Quattro percorsi nell'apprendere adulto*, Franco Angeli, Milan, 219-301.
- Prince M.J. and Felder R.M. 2006, *Inductive teaching and learning methods: Definitions, comparisons, and research bases*, «Journal of Engineering Education», XCV, 123-138.
- Reeders E. 2000, *Scholarly practice in work-based learning: Fitting the glass slipper*, «Higher Education Research & Development», XIX (2), 205-220.
- Yin R. K. 2003, *Case study research design and methods*, Sage, Los Angeles.