



HAL
open science

Co-orientation©: a collaborative method to guide students' decision-making to a right first job

Nathalie Chelin, Siegfried Rouvrais

► To cite this version:

Nathalie Chelin, Siegfried Rouvrais. Co-orientation©: a collaborative method to guide students' decision-making to a right first job. EDULEARN 2020: 12th International Conference on Education and New Learning Technologies, Jul 2020, Palma, Spain. 10.21125/edulearn.2020.0618 . hal-02959184

HAL Id: hal-02959184

<https://hal.science/hal-02959184v1>

Submitted on 27 May 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

CO-ORIENTATION©: A COLLABORATIVE METHOD TO GUIDE STUDENTS' DECISION-MAKING TO A RIGHT FIRST JOB

Nathalie Chelin and Siegfried Rouvrais

*IMT Atlantique, Lab-STICC, UMR CNRS 6285, Graduate School of Engineering
(FRANCE)*

Abstract

Career preparation courses or support for higher education students have been strengthened, following some recommendations of international quality assurance standards. This paper presents feedback about a method implementation of collaborative learning practices on career guidance at a French graduate engineering school. The co-orientation© method relies upon groups of students applying simple and original pedagogical input, paced over time. The aim is to provide students with a proven method to facilitate decision-making for future professional mobility, throughout careers that will be subject to the vagaries of a volatile, uncertain, complex and ambiguous international markets. The method approaches career preparation through positive psychology that promotes self-fulfilment and self-actualisation. It adapts co-development facilitation techniques to ensure neutrality and empathy, feedback seeking, as well as a peer-learning pedagogy derived from cognitive psychology. The course is structured in six capsule sessions of two hours each and presented in the paper with learning outcomes. The method can thus be quickly integrated as a ready-to-go toolkit in career training courses, to allow any university to implement it more easily and autonomously.

Keywords: Professional identity, co-development, career / employment guidance, coaching, lifelong learning, peer learning, employability, career decision.

1 ORIGINS OF THE METHOD

The prospect of nomadic careers leads the future graduate to be proactive in his life choices, which is declined as 'knowing how to become oneself or undertake for oneself'. In the context of professional careers that have become nomadic [1], students need orientation and reorientation tools to autonomously approach career mobility throughout their lives. Acquiring methods, techniques and tools in order to best choose one's career path then becomes essential [2]. At the end of their studies, students have to make life choices, which include choosing their first job. 'From these choices emanate a way of life, to be rich in consequences for their personal, social and family lives including the following milestones: the emergence of the first professional identity, the discovery of new facets of their personality, interaction in an unknown environment, the opening up to possibilities previously unconsidered and the beginning of a new life' [3].

At IMT Atlantique, a French graduate engineering school, the findings of a survey, conducted annually to measure the professional integration of young graduates, revealed students' lack of anticipation and reflection to professional life. A lack of relevant support in the curriculum was also highlighted. In the IMT Atlantique career preparation programme, authors have responded to these needs by implementing a collaborative method called Co-orientation©. The objective is to 'make each student an author and agent of his/her training and of his/her career orientation, while, at the same time providing a toolkit and benevolent guidance' [4]. The method was developed by Professor Isabelle Liotta from Mines ParisTech in France, members of the IMT group. It approaches career preparation by relying on coaching through positive psychology that promotes self-fulfilment and self-actualisation [5], and by adapting co-development facilitation techniques to ensure neutrality and empathy [6], feedback seeking [7], as well as a peer-learning pedagogy derived from cognitive psychology that builds on collective knowledge [8] and generalised self-efficacy [9]. The method, which consists of relying on the concept of action within a peer group of students so that they may orientate themselves and help each other, was chosen because 'Exchanging with others about one's experiences allows for learning that would otherwise be impossible' [10].

2 CHARACTERISTICS AND PEDAGOGICAL FRAME

The co-orientation© method relies upon groups of students applying simple and original pedagogical input, paced over time. The method is based on the fact that the individual is more effective in helping peers to orient themselves than in helping him/herself to do so. The standard of the method is therefore a peer-to-peer pedagogy, 'learning for everyone, by everyone of almost anything' [11]. The groups are composed of five participants with a common objective to identify the ideal professional environment of potential first job. The activity favours the use of drawings to convey one's ideas as to be seen in Figure 1. The group facilitator, who is often a former student, guarantees the method.

There are two roles that the participants take alternately in each session: (i) the role of the 'coachee' when they give back an exercise (ii) and the role of 'consultant' when they question or refer to an opinion. In this way, they learn 'to enrich and broaden their understanding (thinking and feeling) and their capacity to act' [12, 13]. Feedback is given in a benevolent manner through the practice of nonviolent communication.



Figure 1. Examples of presentation: 'awareness of one's personal attitudes and skills'.

Planned over a maximum of 10 weeks, each group meets in six 2-hour sessions to create a collective dynamic. Each session is called a capsule. The total duration of the course is 40 hours (20 hours in collective sessions, 20h personal work) with 2 ECTS credits for recognition of learning in the curriculum, as linked to core learning outcomes and transversal skills as decision-making. The pedagogical framework is detailed in Table 1 with the six phases, their learning outcomes and objectives. The learning outcomes are aligned with the CDIO syllabus standard #2, focusing on the engineering skills: Awareness of One's Personal Knowledge, Skills, and Attitudes; Curiosity and Lifelong Learning; Professional Ethics, Integrity, Responsibility and Accountability; Professional Behaviour; Proactively Planning for One's Career; Team Operation; Team Growth and Evolution; Leadership; Written Communication; Oral Presentation and Inter-Personal Communications; Enterprise Strategy, Goals, and Planning; and Technical Entrepreneurship.

Table 1. The Co-orientation© method framework in 6 sessions mapped with CDIO standards #2.

6 Sessions, 40 hours over 12 weeks	Learning outcomes	Objectives / as per CDIO learning outcome areas
Session 1: Draw your dreams & nightmares and an exercise in 'What I like & What I dislike'	<ul style="list-style-type: none"> Identifying values, aspirations, learning from others, gaining confidence. 	<ul style="list-style-type: none"> Awareness of One's personal attitudes, skills, knowledge (CDIO 2.4.5) Team growth and evolution (CDIO 3.1.3)
Session 2: Career Choice	<ul style="list-style-type: none"> Learning about professions. Projecting oneself as a young professional. 	<ul style="list-style-type: none"> Curiosity and Lifelong learning (CDIO 2.4.6) Proactively planning for One's career (CDIO 2.5.3)
Session 3: Three professional target scenarios	<ul style="list-style-type: none"> Making First Professional Choices. Choosing 3 scenarios to choose from. Target engineer and contacting 	<ul style="list-style-type: none"> Identifying sectors, careers and companies according to market realities Professional ethics, integrity, responsibility and

	professionals – Networking	accountability (CDIO 2.5.1)
Break of 6 weeks	<ul style="list-style-type: none"> • Networking / 10to20 interviews 	
Session 4: Interviews with the targeted professionals	<ul style="list-style-type: none"> • Completing one's e-identity. In-depth Interviews of professionals, the professional environment and the labour market. • Networking & enhancing employability. 	<ul style="list-style-type: none"> • Time and resource management (CDIO 2.4.7)
Session 5: The individual professional development assignment strategic plan	<ul style="list-style-type: none"> • Interview analysis and measuring the gap between reality and initial scenarios. • Data analysis and action plans. 	<ul style="list-style-type: none"> • Oral presentation and interpersonal communications (CDIO 3.2.6) • Staying aware of the world of engineering (CDIO 2.5.4)
Session 6: Projection	<ul style="list-style-type: none"> • Maintain and develop one's first professional network. Define the principal target. Networking 	<ul style="list-style-type: none"> • Professional behaviour (CDIO 2.5.2) • Leadership (CDIO 3.1.4)

3 STRENGTHS AND AREAS OF IMPROVEMENT

A qualitative analysis was conducted in 2016 and is reported by Gerwel Proches, Chelin & Rouvrais [18]. The article analysed the influences of career projections before and after applying the method, among students who had followed a Co-orientation© workshop, in order to determine (i) the influence of the workshops on the definition of career trajectories (ii) the learning of managerial skills such as communication, listening, empathy, public speaking, developing the personal skills of others, and (iii) the introduction of individual coaching as a complement to group coaching. Some strengths of the method were identified:

- the method sustains way of thinking for future managers to make the right career choice in accordance with their personality and interests. Experimental learning theory takes its source on the prominent works of early scholars of human learning 'from experience' (e.g. Dewey theories). The intention behind the use of 'self-directive learning' is that it can better equip students with the skills to become lifelong learners. The method facilitates enhancing self-awareness and developing emotional intelligence through teamwork. 'The need for self-reflection and self-awareness are more and more required in professional practices: self-awareness, self-regulation, motivation, empathy, and social skills, at appropriate times and ways and in sufficient frequency to be effective in the situation' [14];
- the method questions students about their deep motivations, intrinsic & extrinsic. At the end of the coaching, a 'ready to use' action plan is formalised;
- the method puts a context towards managerial practices. The diversity and variety of personalities are the wealth of resources within the group. Some group members will assert themselves and enhance leadership qualities;
- the method is transitive. Thanks to the group dynamic that is multiplied and perpetuated: a student who has experienced the Co-orientation© method can, as early as the next coming year, become a resource or Mentor. Conducting interviews makes it possible to create an interesting professional network and to assert the e-identity;
- the method is transferable to different audiences: Ph.D. students, VET sectors, adults in reorientation, students of business or management schools or broader STEM education.

As part of the Competency-Based Approach (CBA) in place at IMT Atlantique campus of Brest, the co-orientation© method is part of the integrative pedagogy approach composed of formative and summative evaluations on problem situations related to the reality of professional life for 12 years. A

formative evaluation improves the judgement skills of learners. But some weaknesses are still to be addressed in this course and applied method:

- target students: the method is more easily applied to final year students (Master level-2, in our case). An experiment at IMT Atlantique was carried out with a mix of second- and third-year engineering students (M1 and M2 in the French graduate system). In this case, the group dynamic did not lend itself to guarantee success due to the greater general difference in levels of maturity observed;
- student discovery of the 'VUCA world' [15] is done via the interviews. It is important to develop students' awareness and agility towards the volatility, uncertainty, complexity and ambiguity of the international market. More investigations are needed on these specific contexts;
- intrinsic and extrinsic motivation: students volunteer for Co-orientation©. This commitment guarantees involvement. Research studies [16, 17] show that these modalities of motivational dynamics have an impact on learning and on deciding. More rigorous and objective analysis on motivational issues are required, quantitatively and qualitatively;
- supervising Co-orientation©: supervision plays a fundamental centralising role in perpetuating the training system, a network of trained coaches and correspondents is to be animated and federated on a larger scale.

4 CONCLUSION AND PERSPECTIVES

The Co-orientation© method focuses on peer learning, incorporating both personal and professional development that is reality-based. On an individual level, this method offers the student the opportunity to embark on a lifelong process of reflection, to discover their uniqueness as well as a managerial attitude based on mutual help and respect. It allows the student 'to confront the possibility of failure or to bounce back after periods of unemployment that may well be the fate of those in nomadic careers "[19]. On a collective level, students are confronted with different points of view and controversies. Caring communication fosters acceptance of diversity, especially with intercultural groups. Consequently, the method can be transferred and quickly integrated as a ready-to-go toolkit in career training courses of a university. To a certain extent, the method participates in what Lacaze and Fabre [20] termed 'the organisational socialisation' of students, prior to their leap into the world of work.

More globally on decision-making skills, the European DAhoy project with France, Scotland, Spain and Iceland supports the coherent inclusion of active and engaging pedagogical models [21]. It investigates Decision Making as a transversal skill, in association with three complementary dimensions, including Career-based Decision Making, to better choose career paths. For universities at educational program level, even if accreditation is based on demanding criteria not addressing career guidance, it is important that they include professional training sessions with standardised practices related to employability. A major outcome of the DAhoy project are seven decision skills proposed for VUCA training: (D1) recognise and qualify the VUCAity of a family of situations, (D2) analyse VUCA situations, (D3) make a judgement in VUCA situations, (D4) face complexity of VUCA situations, (D5) organise and implement actions in VUCA situations, (D6) take responsibilities in the decision process in VUCA situations, and (D7) learn from his/her experience of VUCA situations. Promptly after the COVID-19 crisis is over, or possible with-COVID era, higher educational institutions must revise, stimulate and even create new collaboration approaches to meet these seven VUCA skills. The learning outcomes taken into account in this paper are then to be mapped to these VUCA skills.

From a deontological standpoint, the method provides an ethical frame of reference in terms of management and self-knowledge. The skills acquired allow evolution towards the status of managerial engineers or entrepreneurs. The notion of mutual aid is transferable to other projects even beyond humanitarian aid: mutual assistance to work with colleagues in difficulty (and not competition or individualism), tolerance for long-term absences, listening and empathy for the staff, ability to innovate and change work process to organise schedules, social inclusion. The intercultural dimensions of the participants encourage international careers and provide some examples of engineers who are 'citizens of the world' [22]. Finally, the questioning of social and strategic policies, corporate cultures

and globalisation are among the subjects to be dealt with, in response to the issue of social responsibility which is of considerable importance for today's students.

ACKNOWLEDGEMENTS

The authors would like to thank Professor Liotta from Mines ParisTech (France) and Associate Professor C. Gerwel from University of KwaZulu-Natal (South Africa) for their inputs and elements of analysis of the method presented. This work was possible thanks to the DecisionShip Ahoy project, co-funded by the Erasmus+ programme of the European Union (www.dahoyproject.eu) and 12 years of career guidance management in the IMT Atlantique campus of Brest. The European Commission support for the production of this publication does not constitute an endorsement of the contents, which reflects the author views only, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

REFERENCES

- [1] Cadin L., Bender A.F., and de Saint-Giniez V. '*Carrières nomades : les enseignements d'une comparaison internationale*,' Paris, Éditions Vuibert, (Entreprendre), 2003.
- [2] Rouvrais S. and Chelin N., 'Engineer Professional Identity: For an Early Clarification of Student's Perceptions,' In Electronic Proceedings of the 6th International *CDIO Conference*, École Polytechnique, Montréal, June 15-18, 2010.
- [3] Liotta I. and Guiraud-Deville D. "*Coacher avec la Co-orientation© : guider les diplômés vers leur projet de vie*". In French. Presse des Mines, 2019.
- [4] Exetier A., Bureau D., Cousty J., et al. "*Préparation progressive du projet professionnel et personnel*". In French. In Proceedings of '*Les innovations pédagogiques en enseignement supérieur*', 7th French-Intl. Colloquium *Questions de pédagogies dans l'enseignement supérieur*. University of Sherbrooke, Canada, 2-5 June 2013.
- [5] Seligman M. 'Learned Optimism: How to Change Your Mind and Your Life.' Nicholas Brealey Publishing, 2018.
- [6] Davis M. H. 'A multidimensional approach to individual differences in empathy'. *JSAS Catalog of Selected Documents in Psychology*, 10, 85, 1980.
- [7] Tuckey M., Brewer N., and Williamson, P. 'The influence of motives and goal orientation on feedback seeking'. *Journal of Occupational and Organizational Psychology*, 75, pp.195–216, 2002.
- [8] O'Donnell A. M. and King A. 'Cognitive perspectives on peer learning'. Rutgers Invitational Symposium on Education, 1999.
- [9] Chen G., Gully S. M., and Eden D. 'Validation of a new general self-efficacy scale'. *Organizational Research Methods*, 4, pp. 62–82, 2001.
- [10] Payette A. and Champagne C. '*Le groupe de codéveloppement professionnel*', In French. Presses de l'Université du Québec. 211 pages 2005.
- [11] Brazil J. 'P2PU: Learning for Everyone, by Everyone, about almost Anything', May 23, 2011.
- [12] Payette A. '*Le groupe de co-développement et d'action formation, une approche puissante encore méconnue*'. In French. Effectif Vol 3, n°2, 2000
- [13] Payette A. "*Le développement et autres formes d'apprentissage action*". In French. *Numéro spécial de la revue interactions*. Vol 5, n°2, automne, Sherbrooke, Département de psychologie, Université de Sherbrooke, 18 articles, 224 pages., 2001.
- [14] Goleman D. 'Working with emotional intelligence'. New York: Bantam Books, 1998.
- [15] Rouvrais S., Gaultier Le Bris, S., and Stewart M. "Engineering Students Ready for a VUCA World? A Design based Research on Decisionship," in *Proceedings of the 14th International CDIO Conference*, pages 872--881, KIT, Kanazawa, Japan, June-July, 2018.
- [16] Conger J. 'Learning to lead: the art of transforming managers into leaders', Jossey-Bass, San Francisco, 1992.

- [17] Viau R. '*La motivation en contexte scolaire*'. In French. 5th edition, 218 pages, May 2009.
- [18] Gerwel Proches C., Chelin N., and Rouvrais S., 'Think first job! Preferences and expectations of engineering students in a French 'Grande Ecole', '*EJEE European Journal of Engineering Education*, Engineering Education Research in Europe – coming of age. Pages 309-325, volume 43, Issue 2, 2018.
- [19] N. Chelin et S.Rouvrais, "Identité professionnelle et anticipation des carrières nomades des jeunes ingénieurs : construire et non subir son orientation professionnelle", in French. In Proceedings of '*Le courant de la professionnalisation : enjeux, attentes, changements*', 6th French-Intl. Colloquium *Questions de pédagogies dans l'enseignement supérieur*. Pages 153-160. 8-10 June 2011.
- [20] Lacaze D. and Fabre C. '*Présentation du concept de socialisation organisationnelle*', in French. In N. Delobbe, O. Herrbach, D. Lacaze, K. Mignonac, *Comportement organisationnel*, Bruxelles, De Boeck, p. 273-302, volume 1. 2009.
- [21] Chelin N., Matthiasdottir G., Serreau Y., Tudela L., Rouvrais S., and Jordan K. 'To embrace career decision making in STEM education'. In 11th International Conference on Education and New Learning Technologies. Edited by L. Gómez Chova, A. López Martínez, and I. Candel Torres. Pages 3058-3066. Palma, Mallorca, Spain, 1st-3rd July, 2019.
- [22] Gourves-Hayward A. and Morace C. '*Ingénieur Citoyen*'. In Union des Professeurs de Langues des Grandes Écoles d'Ingénieur et de Management (UPLEGESS) book. Sanchez-Albarracin & Eschenauer Eds. École centrale de Lyon. Éditions Presse des Ponts. 2017.