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## Higher Education Quality and Guidance: efficacy of a career self-management seminar for undergraduates

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### Abstract

Career services and interventions based on research and empirical evidence are progressively considered mechanisms for quality assurance in higher education. We present a study on the effectiveness of a career self-management seminar designed for help undergraduates prepare for next life career changes and goal attainment. Four hundred and twenty eight students with an age mean of 22 years old (n=208 experimental group; n=220 control group) attending university and polytechnic higher institutions in the northwestern Portugal, were assessed by the Career Exploration Survey, the Career Development Inventory and My Vocational Situation according to a pretest and posttest design. The Seminar is research based and comprises nine weekly small group sessions of 120 minutes each which facilitate students' career planning, in-depth exploration, goal implementation and feedback competences. Results indicate significant differences between experimental and control groups, with increase in most of the career dimensions, among the experimental group. The career seminar produced a medium mean effect size of .53. The intervention positively affected undergraduates' career self-management processual behaviors.

### Key words

Higher education; career services; evidence-based; efficacy.

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# Calidad en Educación Superior y Orientación: eficacia de un seminario de gestión personal de la carrera para pre-graduados

## Resumen

Los servicios e intervenciones de orientación basados en investigación y evidencia empírica se han considerado progresivamente mecanismos de aseguramiento de la calidad de la educación superior. Se presenta un estudio sobre la eficacia de un seminario de gestión personal de la carrera en el que participan cuatrocientos veintiocho estudiantes con una edad media de 22 años (n = 208 grupo experimental, n= 220 grupo control) que acuden la universidad o politécnico en el noroeste de Portugal, que fueron evaluados por tres instrumentos: la Escala de Exploración Vocacional, el Inventario de Desarrollo de la Carrera y Mi Situación Vocacional, con un diseño pre y pos test. El seminario se basa en la investigación, e incluye nueve sesiones semanales de 120 minutos cada una, en pequeño grupo, que facilitan la planificación de la carrera, la exploración en profundidad, la aplicación de objetivos y las competencias de retroalimentación. Los resultados indican diferencias significativas entre los grupos experimental y de control, con aumento en la mayoría de las dimensiones de carrera, entre el grupo experimental. El seminario produjo un tamaño de efecto medio, mediano, de 0.53. La intervención afectó positivamente los comportamientos procesuales de gestión personal de la carrera de los estudiantes de pregrado.

## Palabras clave

Educación superior; servicios de orientación; basada en evidencia; eficacia.

## Introduction

The improvement of the quality of higher education practices has become a common focus of the Western world governments and higher education policy networks (Hénard & Mitterle, 2010). As a result, several definitions and models of assessment and management of quality in higher education can be found in the literature. Different meanings of quality are being socially constructed inside and outside higher education institutions, with the concepts of perfection, consistency, capacity to mission achievement, added value, transformation or accomplishment of requisites or standards assessment being used as synonymous of quality (Gonzalez & Espinoza, 2008, pp.271). At the same time, distinct models of higher education quality give attention to one or more dimensions of the problem, such as quality assurance, quality development, quality evaluation, either or for programs and institutions. Blanco-Ramirez and Berger (2014) suggest an integrative and contextualized conceptual approach to the problem, which connects the discussion of quality to the topics of higher education relevance, access, and investment in local settings.

One topic of importance in different higher education contexts is the need to provide mechanisms of students' educational and counseling support that promotes their integration in the academic community, their academic success, mobility and employability (e.g., OECD, 2004; Cullen, 2013). These mechanisms are being progressively integrated in

quality practices and standards assessment in higher education (Hooley, *in press*). Career services can respond to these needs, providing a multiplicity of pre-entry, graduate and alumni interventions (e.g., face-to-face, group, curriculum based, extra-curricular work learning experiences, supported by technology, self-administered). Broader access to these services by higher education candidates and students requires a consistent and friendly career development educational agenda. It requires also the investment of higher education institutions in funding that supports the recruitment and training of specialized staff, the acquisition of materials and the building of appropriate infrastructures. The European Lifelong Guidance Policy Network (ELGPN), including the Quality Assurance and Evidence (QAE) Framework provides an approach for policy-makers and executives to guarantee quality in higher education career practices. Consider research on the quality of higher education career interventions is also an important prerequisite for the success of such a strategy. These goals can be achieved by the establishing of systematic collaborative work between academics and practitioners in the field.

Career interventions can improve the quality of higher education, especially when they are based on research or on empirical evidence (Chambless & Hollon 1998). Additionally, effective career interventions in higher education must be integrated in a life-long support system, not only to facilitate students' career decision-making and transition to the labor market, but also to develop their long-life career management competencies, that is, their employability and career construction abilities throughout their lives (e.g., Bridgstock, 2009; CEU, 2008; Reis, Formosinho & Costa Lobo, *in press*). In fact, effective career practices should promote individuals' potential, helping them to recognize their strengths, while contributing to facilitate their psychosocial career meta-capacities (Coetzee, 2014) and aspirations and engagement in learning and work (CEDEFOP, 2010). This type of strategy can impact not only the students and the universities, but also the labor market organizations, and the overall society (Hiebert, Schober, & Oakes, 2014; Hooley, *in press*). It is therefore important to address evidence-base of higher education career interventions, since these interventions play a critical role in the quality improvement of higher education system as whole.

We present a research study that offers evidence on the efficacy of a career seminar designed to improve the career self-management of undergraduate students from university and polytechnic settings. Career self-management consists of a continuous and cyclic process of self-regulated decision-making, involving planning, exploration, execution, and feedback around valued career-life goals by individuals with impact on significant others and on society (Author, 2013; Pinto, 2010; Author & Moreno, 2010). Career self-management may be influenced, for example, by content or task-specific self-efficacy (King, 2001; Lent & Brown, 2013), desire for control of career goals and career values (King, 2001), outcome expectations and environmental supports and barriers (Lent & Brown, 2013) and impacts career consciousness and self (Greenhaus, Callanan, & Godshalk, 2010; Savickas, 2005), career control and satisfaction, resilience, mobility, career success, or maladjustment (e.g., King, 2001; Kossek, Roberts, Fisher & DeMarr 1998; Lent & Brown, 2013; Noe, 2010). Research evidence supports career seminars are well accepted by university students (e.g., Luzzo, 2000; Reese & Miller, 2006) and one of the most effective career intervention modalities with higher education populations (e.g., Brown & Krane, 2000; Spokane, 2004; Whiston, Brecheisen, & Stephens, 2003).

## Method

### Participants

Participants are 428 higher education students from both sexes, with a larger number of women (357 girls and 71 boys), aged from 18 to 40 years old ( $M=21.85$ ,  $DP=3.08$ ), and organized in an experimental group ( $n=208$ ) and in a control group ( $n=220$ ). The experimental group included 177 girls and 31 boys, with ages ranging from 18-40 ( $M=22.49$ ,  $DP=3.38$ ) who were attending the intermediate years of their graduation programs in Education, Social Sciences and Health, at university ( $n=147$ ) or at polytechnic ( $n=61$ ), in Norwest Portugal. The control group included 180 girls and 40 boys, with ages ranging from 18-37 ( $M=21.23$ ,  $DP=2.62$ ), who were attending the intermediate years of their graduation programs in Health, Science, Education and Social Sciences, at university ( $n=4$ ) or at polytechnic ( $n=216$ ) in Norwest Portugal. This is a study using non-random groups, since the sample included real career counselling clients who voluntarily enrolled in a career self-management seminar offered by their institutional counselling centre and their colleagues who decided not to attend the seminar.

### Design

The study adopted a quasi-experimental design with a pre- and post-test and two conditions: an experimental group and a control group.

### Instruments

The sociodemographic information on course, gender, age and qualifications was collected through a questionnaire designed for the purposes of the study.

*Career Exploration Survey* (CES; Stumpf, Colarelli, & Hartman, 1983; adap. by Author, 2000). The CES includes 54 items designed to assess three main components and twelve dimensions of the career exploration process (a) beliefs – perceived employment outlook, certainty of exploration outcomes, external instrumentality of exploration, internal instrumentality of exploration and importance of career preference, (b) behavioural - environment exploration, self-exploration, intended-systematic exploration and amount of acquired information, (c) reactions - satisfaction with information, stress with next exploration activities and stress with next career decision making. Of the 54 CES' items, 53 are responded in a Likert-type response scale of five categories (items 1 to 43) or seven categories (44 to 53), with 1 meaning “Complete unsatisfied“ or “Unsure” and 5 and 7 meaning “Completely Satisfied” or “100% Sure”, and also an item (item 54) for indicating the number of career areas already explored. Previous studies (Author 1, 1997, 1998) indicate CES is suitable for use with Portuguese adolescents (Author 1 & Moreno, 2003) and with university and non-university Portuguese adults (Silva & Author 1, 2010; Soares, 1998).

*Career Development Inventory* (CDI; Super, Thomspson, Lindeman, Jordaan, & Myers, 1981; adapt. by Ferreira Marques & Caeiro, 1981). The CDI is an inventory designed to assess career decision readiness. The Planning, Career Decision Making and Knowledge of the Occupational World scales were used, composed by a total of 55 items with a 5 point Likert type response scale (1= “I never thought about that” to 5= “I have clear plans and I know how to achieve them”).

*My Vocational Situation* (MVS; Holland, Daiger, & Power, 1980, adapt. by Silva, 1997) is a self-report inventory designed to assess individuals' vocational identity status, knowledge of career information and perceived career barriers. The MVS was developed to assist counselors and psychologists to screen populations or clients' needs for career services as well as to evaluate the outcomes of career interventions and research. The MVS includes

one item that requires respondents to list all the occupations they are considering at the moment, plus 18 true and false items composing the vocational identity scale (e.g., “I don’t know what my major strengths and weaknesses are”) and two other yes and no questions, one listing four information needs (item 19; e.g., “What kinds of people enter different occupations”) and the other listing four career barriers (item 20; e.g., “I don’t have the money to follow the career I want most”). False or no responses are scored as 1 and true and yes responses as zero. Higher points in the total score of the MVS indicate more reported problems. Several studies established empirical evidence for MVS validity and reliability (e.g., Holland, Daiger & Power, 1980; Hirschi & Herrmann, 2013; Lucas, 1999; Nicholas & Pretorius, 1994; Tinsley, Baumann & York 1989; Santos, 2010; Silva, 1997).

*The Career Self-Management Seminar (version A)* (Author, Silva, Author, Faria, Araújo, & Pinto, 2006). Consists of a preventive specialized intervention based on career theory and research (e.g., Greenhaus, Callanan & Godshalk, 2010; King, 2001; Kumar, 2007; Lent & Brown, 2013; Noe, 2010; Savickas, 2005, 2012) and evidence on elements of career interventions efficacy in higher education (e.g., Luzzo, 2000; Pinto, 2010; Kivlighan Jr., Coleman, & Anderson, 2000; Sampson Jr., McClain, Musch, & Reardon, 2013). It was designed to improve the career management competencies of college students attending the intermediate years of their graduation programs. Specifically, it aims to help students (a) to develop a positive vision of their future, (b) to explicit valued goals in academic, occupational and personal life areas, (c) to plan and test the execution of those goals, from an integrated and reflected perspective and (d) to increase in-depth exploration and ordering of training and job opportunities in preferred areas. The seminar comprises a total of nine weekly 120 minutes sessions, conducted in a small group format (6-8 participants). Session zero includes the administration the pre-test measures, presentation and establishment of a helping relationship between counsellor and participants, broader exploration by participants of their career history and motivation to attend the Seminar and related expectations, general presentation and discussion of Seminar themes, goals, activities and rule setting, and motivating for next session. Session one includes in-depth exploration of one’s career path, discussing old and new career concepts, development of a positive attitude towards the future. Session two is dedicated to support participants’ examination of goals, skills and personality in the employment context and the setting of career and life goals, of short and medium term. Sessions three, four and five includes helping students anticipating and preparing their next career decision, by assessing personal difficulties in career decision-making, learning career decision specificities, defining criteria for career exploration and specifying a list of choices and priority actions, with the use of written media, internet and videos and between session activities. In the sixth and seventh sessions, students simulate the execution of their decisions, and learn how to solve practical problems related to this task, in real contexts. They also discuss the importance of generalization of this process to other career decisions and phases of their life-career. Session eight includes the administration the post-test measures, and evaluate the impact and conclude about the Seminar (Pinto, Loureiro & Taveira, *in press*). The seminar process combined five critical elements associated to career intervention efficacy, that is, written exercises and a workbook, counsellor individualized feedback, world of work information, modelling and increase of environmental support (Brown & Ryan Krane, 2000; Brown, Ryan Krane, Brecheisen, et al., 2003; Ryan, 1999).

### Procedure

The director of each of the higher institutions involved in data collection was contacted and informed about the research and intervention goals and a consent to proceed with the study was obtained. Publicity about the seminar was disseminated to all students at each

institution, by email, display of posters and distribution of pamphlets. Students enrolled voluntarily to participate in the Seminar integrated an experimental group. The other students were also contacted to integrate a control group and complete the pre- and post-test. The participation of students in experimental and control groups was voluntarily and unpaid. All participants were informed about the research objectives and confidentiality was ensured. An informed consent to participate in the study was also obtained from each student. Data collection occurred with an interval of 8 weeks to outcome measures which, were completed by each individual in the context of the classroom at the beginning and end of the intervention. The instructions for each instrument were read aloud and clarified for all participants. Questionnaires were distributed in varying order in each undergraduate program, to control possible related order effects on the assessment. To ensure data confidentiality, all the questionnaires were paired under an alphanumeric code. Data collection was carried out between October 2009 and July 2010 by a female psychologist with a master's degree in educational psychology. The Career Self-Management Management Seminar was conducted in 26 groups, by three female psychologists: a 49 years old woman, PHD in Educational Psychology, with 18 years of higher education career counseling experience; a 29 years old woman, attending a PHD program in Vocational Psychology and with a 5 year school career counseling experience; and a 22 years old women, with a master degree in Educational and School Psychology, and two years of career intervention experience. The three psychologists received training in the rational and methodology of the career seminar.

## Results

A T-test for independent samples was used to test significant differences in the MVS, CES, and CDI measures between the experimental and control groups at baseline (pre-test). The results indicate that the experimental group scores differ from those of the control group in five dimensions: self-exploration ( $t=1.79; p \leq .05$ ), career decision making ( $t=6.05; p \leq .05$ ) and knowledge of the occupational world ( $t=4.72; p \leq .001$ ) favouring the first, and satisfaction with information ( $t=1.17; p \leq .001$ ) and perceived barriers ( $t=5.38; p \leq .001$ ) favoring the latter. The two groups are therefore only partially equivalents at baseline.

T-student tests for paired samples were used to evaluate statistically significant differences between groups. Also, an ANOVA was used to assess the difference between post-and pre-test measures by group, having the pre-test results as covariate. The results of these analyses are shown in Table 1.

Table 1. Descriptive statistic and analysis of variance at pre-test and post-test moments (N=428)

Instruments and scales		Experimental group						Control group						F	P	
		Pre-test		Post-test		t	p	Pre-test		Post-test		t	p			
		M	SD	M	SD			M	SD	M	SD					
C E S	Beliefs	EO	7.63	2.30	9.29	2.18	-9.86	≤0.001	7.59	2.55	8.46	2.47	-4.45	≤0.001	320.73	≤0.001
		CEO	6.31	2.69	7.58	3.03	-6.39	≤0.001	6.71	2.84	7.25	2.88	-2.45	≤0.05	183.96	0.05
		EI	36.19	5.69	38.36	6.06	-4.80	≤0.001	34.68	5.82	33.78	5.17	2.01	≤0.05	233.50	≤0.001
		II	15.63	2.81	16.13	2.89	-2.22	≤0.05	14.67	2.78	14.14	2.81	2.42	≤0.05	192.33	0.21
		IPP	10.63	2.53	10.63	2.41	-0.03	0.98	11.09	2.32	11.10	2.37	-0.08	0.94	161.65	≤0.001
	Process	EE	13.56	3.57	19.02	3.82	-18.95	≤0.001	13.65	3.48	14.77	3.37	-4.48	≤0.001	321.39	≤0.001
		SE	15.38	4.39	17.82	4.39	-7.24	≤0.001	14.68	3.77	15.26	4.06	-1.88	0.06	227.53	≤0.001
		ISE	5.26	2.04	6.23	1.95	-6.62	≤0.001	5.55	1.78	6.25	1.91	-4.72	≤0.001	258.73	0.59
		AI	9.74	2.12	11.16	1.81	-10.45	≤0.001	10.26	1.88	10.60	1.98	-2.47	≤0.05	229.91	≤0.001
	Reactions	SI	9.48	2.11	11.12	1.92	-10.86	≤0.001	9.69	1.68	10.36	1.88	-4.50	≤0.001	288.32	≤0.001
		ES	15.08	4.42	14.73	4.43	1.11	0.27	15.59	4.59	16.56	3.73	-3.08	≤0.01	236.71	≤0.001
		DS	20.54	7.81	18.47	7.25	4.09	≤0.001	18.98	7.57	18.58	6.82	0.81	0.42	132.37	0.16
CDI	CP	69.40	11.34	77.64	10.63	-12.31	≤0.001	72.25	11.55	73.66	11.68	-1.72	0.09	178.67	≤0.001	
	DM	9.68	2.10	10.26	2.16	-3.52	≤0.001	8.33	2.49	7.20	2.90	5.18	≤0.001	137.22	≤0.001	
	WWI	13.57	2.56	14.00	2.63	-2.25	≤0.05	12.21	3.34	10.70	3.89	4.97	≤0.001	138.29	≤0.001	
MVS	VI	11.00	3.43	13.58	3.11	-9.68	≤0.001	12.56	3.28	13.05	3.38	-2.52	≤0.05	243.37	≤0.001	
	OI	1.74	1.34	2.27	1.36	-4.77	≤0.001	1.71	1.31	2.02	1.41	-2.76	≤0.01	245.76	0.06	
	B	3.01	1.24	3.56	0.78	-6.14	≤0.001	3.55	0.81	3.50	0.94	0.82	0.411	423.14	≤0.05	

Legend: EO= Employment Outlook; CEO= Certainty of Career Exploration Outcomes; EI= External Instrumentality; II= Internal Instrumentality; IPP= Importance of Preferred Position; EE= Environment-Exploration; SE= Self Exploration; ISE= Intended-Systematic Exploration; AI= Amount of Information; SI= Satisfaction with Information; ES= Exploration Stress; DS= Decisional Stress; CP= Career Planning; DM= Decision-Making; WWI= World of Work information; VI = Vocational Identity scale; OI= Occupational Information scale; B= Barriers scale.

Table 1 indicates that, in the experimental group, the differences between post and pre-tests were statistically significant in all dimensions (with higher scores in post-test) but for Importance of Preferred Position (null effect) and Exploration Stress (a lower mean value, which is a positive result). In the control group, the differences between post and pre-tests were statistically significant in all dimensions but for Importance of Preferred Position, Self-Exploration, Decisional Stress, Career Planning, and Barriers. In general, differences between pre- and post-test are statistically more relevant in the experimental group condition than in the control condition. The mean difference analysis between experimental and control group, at post-test, having the results of the pre-test moment as co-variation variable, reveals statistically significant differences at all of the career exploration subscales, with higher mean values in the experimental group, except in the Importance of Preferred Position, Intended-Systematic Exploration and Exploration Stress.

Measures of effect size were calculated for the two groups (Cohen's *d*) in each career dimension. A medium mean effect size of .53 was obtained.

## Discussion and Conclusions

This study examined the efficacy of a career self-management seminar designed to facilitate career preparedness behaviors of undergraduates attending university and polytechnic higher education institutions. The results indicate that the seminar was effective in improving the career exploratory attitudes and behaviors of the undergraduates, their planning attitudes towards future career, knowledge on career decision-making and on occupational world and their vocational identity. The seminar also positively impact undergraduates' levels of exploratory and decisional stress. These aspects are considered in the literature either as determinants or as results of career successful and self-determined trajectories in current societies, more complex and fluid (e.g., King, 2001; Kossek, Roberts, Fisher & DeMarr 1998; Greenhaus & Callanan, 2010; Lent & Brown, 2013; Noe, 2010, Savickas, 2005). Results are consistent with previous research on the positive impact of career seminars in higher education students' career development (e.g., Author, 2013; Pinto, 2010; Author & Moreno, 2010). The design of the career self-management evaluated was research based and considered empirical evidence on the efficacy of career interventions, an option that can explain the medium effect size of this preventive program in higher education setting. As expected, the results of this study support the idea of career seminars as a well-accepted intervention modality by university students (e.g., Luzzo, 2000; Reese & Miller, 2006; Whiston, Brechensein, & Stephens, 2003) and the importance of combining critical elements during the intervention process to improve efficacy (Brown & Ryan Krane, 2000; Brown, Ryan Krane, Brecheisen, et al., 2003). Seminars and other distinctive career interventions (e.g., information, internet based, career counselling, career education programs) with preventive and promotional intentions are less common in higher education institutions, although recent evidence on the importance and need of a differentiated and life-long career guidance system in European nations (Hooley, *in press*). Such a life-long and integrated career guidance system promotes informed decisions on academic, occupational and life style, the learning about career transitions, self-knowledge in terms of adaptability and employability. It also prepares individuals to face the successive career development tasks, including transforming the sense and meaning of life. For these reasons, the guarantee of the integration and quality of career services in higher education can be an important component of the quality of the higher education *per si*.

This study has some limitations that should be considered in further research on the topic. The first limitation relates to the sampling method, non-probabilistic, and the non-equitable number of subjects from both sexes included in the sample. Therefore caution must be taken not to generalize the results of the study to the population. Another important limitation is the use of the total number of participants at the seminar on data analysis of the experimental group, instead of using each of the true intervention groups with 6/8 participants each. Future studies should consider the advantages of using non-parametric tests and analyze the results by true intervention group. Finally, another limitation is the lack of data on the evaluation of the process of intervention in relation to its results, which should also be considered in future research.

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