Designing meaningful career tools: A proposal for an optimal use of technology in career guidance

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Abstract. In the last years, the use of technology has been introduced in career guidance to help career practitioners support their clients' career decision-making.

From a critical psychological perspective, this paper aims to analyze opportunities and risks of career guidance interventions through digital technologies. Specifically, the paper starts with a review of the online interventions, the apps and automatic tools available, and the use of social media in career guidance.

A proposal for two possible uses of technologies in career guidance, integrated functions career tools and meaning-making apps, is discussed.

Keywords: Career guidance, Technology, Meaning-making.

1 Introduction

1.1 Career guidance and technology

Career intervention literature emphasizes the variety of possible methodologies career practitioners can count on in order to reach career guidance goals. The increasing availability and designability of online technologies both for practitioners and clients has brought to the introduction of multiple uses of digital tools in career guidance interventions. In the last years the support of technology helped professionals to integrate their practice or invent new ways to enhance their clients' career-related skills and resources. The introduction of technology by itself can transform the characteristic of the intervention, potentially enriching but also sometimes weakening career-related activities. The effect of the introduction of the digital tools and technology-based activities in the guidance practice should be assessed considering the intervention goals. The current paper aims to analyze, from a critical psychological perspective, opportunities and risks in the use of digital technologies in career guidance interventions.

1.2 Career approaches and goals of career guidance

When we talk about career guidance, we refer to a huge amount of different activities, which do not necessarily share the same goal. We could say that the overall aim of career guidance is to suggest a proper career direction to the client who asks for it. Nonetheless, different kind of career guidance have set different goals according to their ethical and theoretical principles. There's a main distinction that can be made between career support approaches which influence career practices which are delivered today. For most of the last century, career support, in line with Frank Parson's [1] and John Holland's [2,3] theories, has been conceived as activities aimed to direct the individuals towards jobs which better matched their personal characteristics (personality traits, attitudes, skills, preferences, etc.). The job of career practitioners was then to: 1) assess the individual's features and interests using tests, interviews or other specific tools, 2) match the proper career or job the individual would have been more suitable according to the underlying theory of the intervention, 3) communicating the suggestion to the individual. The scope of career practitioners, following this idea of guidance, is to analyze the individual and direct her/him towards the environment in which it is more likely for her/him to have success. This matching-skills/environment-fit family of approaches to career guidance is still popular among career practitioners from all over the world and uses the support of evidence-based theories.

Nonetheless, while this conception of career support dominated almost entirely the community of career practitioners from the beginning of the 20th century to the 90s, a new type of approach emerged at the beginning of the 21st century, and is now getting dominant in this guidance field [4]. The theoretical principles which are assumed by the Life Design Approach, which is the label used by Savickas to describe his idea of career guidance, is shared by many others career approaches like the "System Theory Framework"[5], the "Se faire soi" model[6] and many others. This new family of career guidance approaches relies his conception of career support on some main principles. First, it describes the career intervention as an activity aimed to support the individual in his lifelong activity of designing his future. The support is no longer intended as a one for a lifetime activity aimed to provide a single indication for the type of career the individual should be oriented to pursue. For this reason, the emphasis is on the process of guidance itself and not on the outcome of the guidance. Second, the guidance is not intended as an activity in which the practitioner is the expert who leads the counselee towards better choices. Contrarily, career guidance is meant as a way for emphasizing the agentic power of the client who is in charge of his own process of planning, choosing and setting goals for his own future. The client is the center of his guidance process. The goals he sets and achieves, the contents of the activities are almost always starting with the recognition of his own needs. Third, the way through which the individual gets information about how to make choices in the future is always connected to personal meaning. The process of guidance itself is always aimed to elicit the individual's meaning-making ability, trying to explicitly link future career plans to the narratives the individual makes of his own past and to his identity. In this sense, meaning-focused guidance, which is the way we could describe this second family of approaches to career guidance, encourage to build and follow paths "with a heart [7]. The client is supported

in his search for meaningful choices. Through this process he will be able to find a sense which is coherent with the tales he makes of her/himself, creating a vocational identity and fostering his future orientation at the same time [8,9].

The two families of approaches to guidance differ in many aspects. While the first lays on a positivistic perspective, the second follows a constructivist view of the human being. In the environment-fit approach, technical tools are used more frequently than in the meaning-focused guidance. When this last uses pre-prepared practical materials like test or questionnaires, it is not in order to obtain technical data regarding the client, or for diagnostic reasons (categorize him as more fit for a specific environment or job), but as a stimulus for eliciting a meaning-making process. Moreover, while the goals of the first type of guidance are aimed to help the individual reach good job performances or more "successful" paths in terms of career achievements, the second type of guidance pursues the goal of "emancipating" the individual from commitments imposed by others, help him achieve a self-constructed personal identity, support him to overcome social injustices [10] and identity barriers [11].

Ways through which career interventions have used technology-driven methodologies

Since computer technologies have spread all around the world and have become utilizable on a large scale, career practitioners have proposed [12] and found their way to introduce new technology tools for career interventions, or new applications of old methodologies enriched by technological tools and digital devices for their interventions. Here we try to resume some of the main applications technologies have had in the career guidance field:

1) Online counselling

Just as it happened in the clinical psychology and psychotherapy field, the diffusion of new communication systems allowed the possibility of providing remote career guidance services. Since their first applications, the proposal to introduce forms of "at a distance" psychological interventions provoked polarized reactions, including very aggressive forms of resistance by communities of practitioners [13]. In recent times (especially after the Covid- 19 pandemic), the passage from in-person to remote forms of interaction has been more widely accepted and used by professionals coming from different psychological fields [14, 15, 16]. Anyway, online career counseling has been used in the last three decades and is of course one of the most immediate way to benefit from technology in order to enlarge the possibility of career guidance practice. Online career counseling allows to reach more clients and overcome geographical limitations. Hypothetically, career counselor could provide their services to clients from all over the world and, most important, client populations which wouldn't be reached otherwise. At the same time, just as in online psychotherapy, the loss of physical presence changes, the impossibility to look clients in the eye, and the camera perspective change the dynamics of the interactions. Moreover, while relational circumstances change, most career counselor do not receive a formal training for on distance guidance.

While this may have less effect for practitioners who provide environment-fit inspired guidance, it has a significant impact for meaning-making inspired career counseling, where the relationship between practitioner and client is central for the guidance process.

2) Apps and automatic tools

In the last years several digital applications and computer programs were presented, designed both by public institutions and private companies [17], aimed to be used in guidance processes, mainly for high school students or individuals who are about to make choices to begin a career. Applications have the power of being easily accessible, cheap and allow the individual for a more independent use. Usually, career guidance applications, coherently with the tradition of the two families of career guidance, is more akin to be used in environment-fit/matching-skill approach inspired intervention. Most of them are structured for giving information [18] and indications to the user, also containing aptitude tests and tools for the assessment of appropriated career choices [19]. Some of those applications allow the user to contact a career counselor at the end of the process, but the contact seems to be outside of the process stimulated by the apps. While theoretically computer and smartphone application give to the app designer the opportunity to creatively structure the tool in a very wide range of possibilities, in the career guidance field, technology tools have been rarely created to explicitly elicit meaning making. In app stores and on the web, applications and online programs aimed to help people work on personal meaning, creative thinking about self and autobiographical reasoning are currently available.
Nonetheless, it should be noted that the structure of technological devices, by itself, has the tendency to automatize the guidance process. The independence in the utilization of apps, the solitary use one can make of the automatic digital tools is also in contrast with the dialogical idea of meaning making approaches. There are some ideas about designing programs which maintain a dialogical approach like chatbots [18], but those seemed to be more conceived to give answers (indications, information, explication about the career guidance process) than to put questions and elicit meaning making.

Social Media and career guidance

Social media have been used for realizing career guidance interventions [19]. Of course, they can be useful because of their connecting power, for facilitating on distance communications between clients and practitioners. Groups, chats and educational pages for career guidance have been used to stimulate career interventions. Social media have also been themselves the content of reflections about guidance [20]. Indeed, today's transformation brought social media to be one of the possible ways by which it is possible to look for a job. Having a well-prepared Linkedin profile for example is considered of today's prerequisite for an effective job search, and evidences says that often in their practice recruiters and HR professionals look for candidates' social media profiles [21]. Moreover, since fostering virtual identity can be a way of reinforcing personal identity the same could happen with professional virtual identity. Working at your

Linkedin profile may, or even your Facebook professional page, may foster vocational identity clarity. Helping people to present the professional self to the others on an online community may be one of the main tasks of career practitioners in the future.

1.3   Critical analysis: where do technologies lead career guidance?

Psychology of careers can never be conceived as a neutral subject. While the neopositivist approach leading the environment-fit inspired intervention claimed for a neutral activity of the practitioners for the career success of the clients, contemporary practitioners, by selecting the goals and the means they propose to their clients, are called to assume an ideological position towards the guidance practice. Career scholars always confront their theories with other disciplines like sociology of work, politic sciences and economics. The change of paradigm of the last decades in the guidance field has been also determined by historical circumstances.

Today's labor market got transformed in a way that guidance can't be conceived anymore as a once for a lifetime support. The individual for the whole span of his life needs to confront with multiple possibilities and unforeseen choices. The unpredictability of career trajectories needs to be compensated with a focus on personal meaning. The ability to ascribe meaning to one's choices together with other skills like concern, interest about one's future, curiosity, confidence in her/himself and the feeling of control for personal future are crucial elements for the evolution of the individual that counselor try to evoke in clients in order to foster their ability to deal with contemporary career uncertainties.

The risk associated with technology introduction in career guidance are, in our opinion, mainly linked the use of technological tools. The main threaten is to naively underestimate the process of career choice, which is not just a rational decision-making process but also an identity matter [22]. Indications and information given through the utilization of automatic tools and applications for guidance may ultimately function as ascription which limit the vocational exploration of the possibilities of the individual.

As noted, smartphone and technological devices suggest "a solitary use" of career guidance.

The possibility for apps to give easily consultable and reliable labor market information is for sure a good thing. However, given the amount of data related to it, presenting labor market information is also a matter of choice in career guidance [10]. Presenting certain type of data (geographically situated, gender related, rate of occupation, average income, etc.) can encourage certain kinds of choices and deter others. The mediating role of a career counselor who presents and explains data according to the vocational situation of the client appears more desirable than giving him/her a great amount of information hard to interpret.

Moreover, with the exclusion of career professional, suggested by career guidance applications, the risk is to increase the differences in the outcomes of the guidance process between different context (since, as previous works highlighted, same type of applications can produce different outcomes as a consequence of being use in environment with different social and economic resources [17]). Having equally trained professional to take care of intervention may be crucial for moderating differences in outcomes due

to social inequalities linked to the different resources available for the contexts of the interventions.

Finally, the actual effectiveness of the interventions is jeopardized. One of the most important predictors of the effectiveness of career guidance process is the presence of a real counselor who assists the guidance process and supports the clients in his/her choices [23] [24]. The effective benefits of the participation to a technology-enriched guidance intervention, whatever its goals are, may be endangered by the absence of an expert who facilitates the process.

For all of these reasons, an uncritical use of career guidance technologies could lead to ineffective or limited support for career choices, coherent with neopositivist purposes and unappropriated to the vocational identity formation process.

A proposal for an optimal use of technology in career guidance

Though we mainly highlighted threatens to career guidance given by technology, this work doesn't mean to deny opportunities given by the introduction of new tools. The extreme ease in the use of smartphone and websites allows to reach clients who would not ask for career counseling or guidance programs. Moreover, everyday used devices may let career guidance arrive to people in a form in line with their own habits.

Balancing theoretical aims, practical issues and characteristic of the technologies, hereafter we propose two main ways technologies could effectively and appropriately integrate career guidance activities.

    1)   Integrated functions career tools

An integrated career intervention may be a way to combine the benefits coming from various technologies and let them moderate risks of technology use. Putting together automatic assessment tools and online counseling would link the purposes of both most important approaches to career guidance. An app or a website could serve as a virtual basis for several activities. The online portal would thematically link the various activities, so that the purposes of the intervention are clearly explained. The sections of the portal should necessarily contain 1) assessment test of interest/personality/skills 2) reliable labor market information about jobs of interest of the user 3) online contact with a career counselor. This type of program should not be conceived for an independent use of the client. While purposes of the program and theoretical suggestions about the process of making career choices [25] would be freely available, career guidance activities and labor market information providing should be subject to the scheduling of an online meeting with a career counselor. This would be necessary not to dissociate the meaning of the activities, keeping it always inside the same frame. It would also be important that results from the assessment would be revealed during and/or after the conversation with the counselor and not before. This would allow to use the results of the assessment as a meaning basis for constructing a choice with the professional during the online session and not as a prescription for the choice. Evidence-based career suggestions connected with the aptitude of the client would be questioned and discussed.

Other options would be taken into consideration. An extra section for working on virtual professional identity may be also added. The counselor may ask the client to create his own personal professional profile, with information, including past experiences, personal traits, interest, purposes exportable on professional social network. This would give to the client a material (even if virtual) product of the intervention and thus foster his vocational identity clarity. App and programs may contain extra sections as well (for instance encouragement for vocational identity explorations with games and suggestions), as long as the product of those sections gets finally discussed with career counselor.

2) Meaning-making apps

While integrated functions career tools should refrain from allowing the user to make an independent use of the tool, meaning-making apps could let the client have an individual utilization of the application/program. Meaning-making applications or programs should give structured career-relevant stimulus to users in order to support their reflexive process related to career choices. Just like many other apps ("Question diary", "Questions in a box", etc.) or online programs (Jordan Peterson's self-authoring program [26]) currently available, the program would automatically ask to the participants questions about his/her future purposes, his past, his identity, values, relationship, desires, dreams. Using expressing writing [27, 28, 29], the app would increase career reflections and guide the individual through his vocational identity construction process. The structuration of the questions should be designed after the analysis of autobiographical career related themes. The stimuli for meaning-making, just like in the applications previously cited, can be given daily, planning a reflective journey which leads the individual through time towards a career decision. Time goals should be set before starting to use the app/program. This kind of structure in the tool would reproduce the dialogic and meaning focus approach of contemporary career counseling, still allowing an autonomous use.
Nonetheless, availability for online meetings with career counselor at the end of the activities should be given to the user, in order to let him deeply discuss problematic aspect emerged during the process.

Conclusion

In episode one of the famous TV show "Futurama", the main character Philip J. Fry, after getting accidentally hibernated in New Year's Eve 2000, wakes up a thousand year later and needs to find a new identity in this new world. After a first shock, Fry realizes that he is somehow happy of getting a new life opportunity in a different historical time. He can leave behind himself his unsatisfing life as a "loser", broke guy, with a "miserable" delivery boy job. Few seconds after, he realizes he just received his "permanent career assignment" by the "fate assignment officer" based on the analysis of his DNA and his biopsychological attitudes. He has been assigned to the job he is the best at, "just like everyone else". He is a delivery boy! "No! Not again!" Fry shouts

out desperately. This new 31st hypertechnological century society, populated by aliens, mutants and robots, replicated with him the same identity ascription of the old 20th century society. The way through which the role was assigned was different, faster, more efficient, used sophisticated technological tools. The outcome was the same. Fry felt the same feeling of "failure" and limitation of possibilities associated to the role, just like he did in his past. Behind the ascription, a stronger rationale was used as a justification for the process. "Each one needs to do what he or she can do best". If technology can perfectly predict what one can do best, there's no need for career exploration, no choices have to be taken. The meaningfulness of a career choices is not needed.

Such a comic dystopia can help understand one of the risks of an uncritical use of career guidance technologies. While no collective narratives in the postmodern world help people to take career choices as it did in the past [30] for historical reasons linked to the need of awareness to the process of choice and of constructing meaningful careers, and ethical reasons linked to the need of an emancipatory career guidance, career practitioners should avoid refrain from being led by the characteristic of the technology and re-propose a forclusive career guidance [31]. However, career guidance should benefit from the opportunities given by technology and participate to the enrichment of their practices. Tools used with the aim of widening the possibilities of the individuals rather than choosing instead of them would certainly foster the successes of critically designed career guidance interventions.

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