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DIGITAL TOOLS & CAREER SERVICES: USING ONLINE APPLICATIONS TO BOOST STUDENT'S EMPLOYABILITY AND FUTURE CAREER PROSPECTS

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1. Introduction

Universities represent the contact point of the education system with the labour market and since the development of the higher education model it was clear that universities cannot work independently with respect to the companies. A successful higher education institution (HEI) has to construct its academic offer on the basis of the job market needs and has to keep updated the course topics with the new trends in the economy. The best practices for the HEIs show that the higher quality of the education system is normally related to a direct involvement of companies and public administration in the course planning and management.
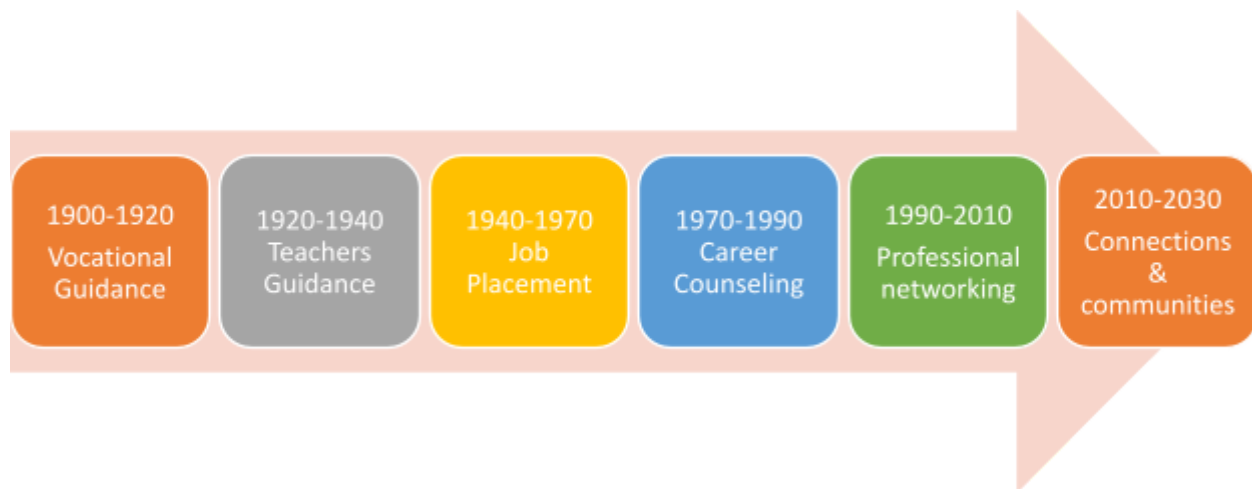
Career officers are the university's employees that work directly with companies in order to understand their needs and provide advice to students about their career opportunities. In fact the quality of the service offered depends on the capability to understand the skills requested for entering in the job market in the near future and to provide services that may help in filling the gap between the students' skills and the job market demand. In the last decades the career service has radically changed moving from a set of more standardized activities to a more student/company oriented activity that are more effective for increasing the probability to get a job for a student.

Digitalization is changing the career officers' activities offering the opportunity to increase the quality of the service offered and optimize the management of the resources allocated in the career advisoring. In the last decades there was a huge growth of the providers of the services for career office activities and nowadays universities have to train their employees in order to select tools and platforms that are more useful for helping their students in entering in the job market.

2. Evolution for the career service in the last century

The career service is changing in the last decades and the type and quality and service requested by the job market and the students has been affected by the new skills requested. An analysis of the historical development of the career service had to consider the following milestones (Dey and Cruzvergara, 2014):

Figure 1. The evolution of the career service

| 1900-1920 Vocational Guidance | 1920-1940 Teachers Guidance | 1940-1970 Job Placement | 1970-1990 Career Counseling | 1990-2010 Professional networking | 2010-2030 Connections & communities |

Source: Dey and Cruzvergara, 2014

The first idea of vocation bureaus was born in United States in the early 1900 in order to help immigrants to find a job upon arrival on the basis of the skill and expertise they had in their home country. Job search at that time was quite easy and did not request specific skills because the was a lack of supply of human resources necessary for supporting the industrial development of the country and employers normally offered a training on the job for the new employees that allow also low skilled individual to get a job (Hirschman and Mogford, 2009).

The job market in the period 1920-1940 has changed because the life quality standards has improved and families started to invest in developing skills of the children by spending money elementary and secondary school. At this stage the role of education in preparing for the job market has changed and teachers assume the role of education guidance for the students in order to help them in order to get an opportunity in the job market (Pope, 2000). At this stage the interaction of education with the job market was not a rule and only some schools especially in the bigger towns and cities were able to offer a valuable service for their students.

After 1940 the career service has changed and it became a real job placement service in which the higher education institutions hire employees that have the duty to help students in entering into the job market. Differently with respect to the previous scenario the focus are the skills and the attitudes of the students and the current job offers in the market and the aim of the service is to create a career planning that allow the student to reach its target in the job market (Kretovicks, Honaker and Kraning, 1999).

The job market in the period 1970s-1990s has become more selective and universities were no longer able to offer a first job opportunity to all the graduates and the previous mechanism that evaluates the career office only on the basis of the number of graduates that obtain a job immediately after the graduation is no longer sustainable. The service offered by universities at this stage was to offer academic programs that matches with the industry needs and provide assistance to students in order to prepare themselves for the future career and for competing in the job market in order to have access to the job they want (Castella, 1990).

Starting from 1990s Universities have increased the attention on the opportunities offered by professional networking and have started to plan and organize events for strengthen relationship with key partners of the industry (Dey and Real, 2010). The development of the technology and the rising of the social networks had also an impact of the career service activities that become more oriented to increase the reputation of the university in the industry and more focused on creating a brand identity on the international job market.

From 2010 the attention on the perceived quality of the career services has reached the maximum and the success of a university cannot be independent with respect to the quality of the job market placement (Dey & Cruzvergara, 2014). The choice of the university is also affected by network of companies involved and the capacity to help students in order to develop their specific career path and each student has specific skills and expectation that the career office has to considered in the mentoring activities. Successful universities are those that are able to offer customized services by organizing career meet-ups and by helping students to create their own network from a selected number of employers, alumni, faculty members and public servants that are normally invited (in presence or virtually) at the university.

The pandemic has affected the career service activity by changing their way of interacting with students and employers due to the social distancing rules and the lockdown issues. In few days all the activities were obliged to move online and the digitalization of the service has speed up for both the career offices and the recruiters with new skills requested for supporting students in entering in the job market. The online interviews become a standard (at least for the first steps of the selection process) and students received counselling also by using virtual meetings with career officers and online tool offered in the website of the university (mock on job interviews, job search seminars, etc....). The new normal created for managing the emergency is expected to

Last also after the end of the pandemic and the social distancing rules and career officers have to consider the new scenario for the human resource selection procedure that will characterize the next decades (Caligiuri et al, 2020).

3. Technology tools

Technology has changed the job of a career office by creating a set of tools that can be used effectively for improving the quality of the service offered to students and reduce the cost and the time spent for supporting each student that requires the service. Solutions offered may be classified in:

- One to many
- One to one
- Many to one

The one to many solution fits for standardized services that career offices have to repeat several times for the different cohorts of students and that normally represents the first set of services offered by the career office. Among them you will have seminars about CV writing tips, rules for creating a customized motivation letter, and overview of the steps in a selection procedure, etc.... Online solution will allow to register only one the lectures and offer to the students the opportunity to access and follow the seminar with a flexible time scheduling. The opportunity to organize MOOC instead of standard face to face seminar will also give the opportunity to students to select to attend only the topics that they do not know and so they can full customize the service on the basis of the previous experience in the job market for the student. The online solution represents a clear value added solution for all the higher education institutions that have a lot of students that are not living nearby or that have different campus widespread in the area because by using online tool all the students will receive the same quality of the career service advisory independently with respect to the possibility to reach the university every day.

The one to one interviews and meeting represent a standard tool used also in the selection procedure by employers and students have to trained in order to perform at their best in a virtual environment. The opportunity to use online solutions has also increased the interest of the companies to hire internationally and the competition in the job market has increased significantly with more international candidates evaluated online for job position in each country. The technology solutions have also offered new tools for the selection procedures that are currently used by companies for selecting the best candidates by using the artificial intelligence in the screening of the candidates and by creating challenges or hackathon online for evaluating the ability to do teamwork and to compete in the real word scenario.

The many to one tools are useful in order to increase the possibility to develop international network and organize (at reasonable costs) events useful for the career path of the students. The first innovation is related to moving conference with industry leaders from the face-to-face

channel to online and the solution seems to be very effective in order to have an higher number of speakers involved that perceive this type of activity less time consuming and so are interested to be involved. Some universities used online tools also for offering mentoring service to the students that want to enter or are just entered in the job marketing and the online solution make easier to identify professionals that wants to help young graduates in the beginning of their career. Online community and meet-up are also solution useful in order to create and maintain an alumni association that could help the university in the placement activities and this solution seems to be best performing when former students move abroad for their career. Activities organized online offer the opportunity to share them also with other partner universities and a joint project based on career service activities organized online may be successful if the partners share knowledge and experience for offering the best service to their students.

4. Digital solutions

Career officers and universities are frequently evaluated by the students in order to select a university and a good track record in the placement may represent an advantage for the university in order to increase the number and/or the quality of the students enrolled. A preliminary evaluation of the quality of the service provided is based on:

- Information availability and content
- Ease of use or usability
- Privacy and security
- Entertainment and graphic style
- Fulfillment and readability

Websites are the main brand of the career office and an updated and complete website may allow to save time in interacting with students for collecting application and with companies for collecting job openings and job description. Universities are investing resources in order to develop new websites that in order to be appealing for students and companies need to the updated periodically and customized on the basis of the specific needs of the community that has to be served.

The development of digital tools is no longer a choice because the current generation of students (generation Z) is global oriented, influenced by social networks, highly demanding, eager to stand out, interested to feedback after experience and responsible on social issues. The type of service requested has to be online, updated on real time and has to provide not only standard information about the job position open and the stage of the recruitment process but also informal feedback and the job or the interview experience (i.e. www.handshake.com).

Campus recruiting is significantly expensive for the employer point of view that has to identify a team of HRs that could visit a campus where there are potential candidates for their job positions. A standard team involved in a recruitment process includes some recruiters that will be involved in the interviews, a campus recruiting director, an operation manager and a marketer and frequently

companies will not have the opportunity to have a full a complete group for the recruitment. Digital solutions are offered to companies in order to reduce the number of people involved in the selection process and to standardize some steps of the procedure in order to offer an high quality service to applicant even with a low number of HR employees involve (i.e. www.yello.com).

A career officer has to help students in order to evaluate critically their skills (both hard and soft skills) and their expectations for the job market and sometimes the simple interview is not sufficient for collecting all the information necessary for understanding fully the candidate. Artificial intelligence may be useful for profiling better the students by collecting additional information related to type of job description posted in the website they read, how much time they spent for each proposal and for which job they decided to start the application procedure (i.e. www.aftercollege.com).

Companies are looking for innovation from outsiders that can be more suitable in identifying innovative approaches for problem solving that are currently non evaluated by the current employees. A solution frequently adopted for identifying the best candidates in the market is to present problems that has to be solved individually (challenge) or in group (hackathon) and winner and above the average participants have normally access to a preferred path for the selection procedure in the company. In order to increase the number of participants in the challenge or in the hackathon normally the call is disseminated through the web and the social networks and there are websites that offer a complete database of the upcoming event with the requirements for joining the project (like target degree and expertise, n° of team members, etc...) (www.mindsumo.org).

Digitalization has changed also the approach to work for career officers that may use digital tool in order to increase the number of students served and/or increase the number of services that may offered to each student. Tolls requested normally has to be able to work on data about candidates, employers and job offering in order to create customized statistics that may be useful in order to identify students that are performing better or worse in the selection procedure, employers that are more or less selective in hiring new employees and to understand the type of job and skills that are more requested or no longer requested by the market (www.gradeleaders.com).

Companies are frequently suffering from an overload of requests for each job posted and the number of applications increases even more in job markets characterized by a high rate of unemployment. The standard solution adopted is to use applicant tracking systems in order to make a first screening of the applications and exclude those that, on the basis of automated text analysis, do not fit the job description. In order to increase the probability of success of students, career office have to consider the impact of ATS in the job application and some tool online may be useful for testing if the CV of the applicant and the motivation letter are coherent or not with the job description posted by the company (e.g. www.jobscan.com).

5. Conclusion

Technology is changing not only the job market but also the education system has to change in order to offer to their students services that may support them in entering the job market. The career office activities have changed from a simple guidance service to a placement service in which the value added perceived is mainly related to networking, connections, and alumni community.

The new and less standardized service offered by the career officer may be offered by using technology and digital tools that allow increasing the quality of the service provided without requesting a significant increase of the budget expenditures.

The Covid-19 has sped up the innovation by forcing career service to use for the first time technology tools for one-to-one activities, one-to-many events and many-to-one tools. Digital solutions available for career officers' activities are growing over time and universities have to select the tools that are more useful on the basis of the students' skill, the target job market, and the type of activities jointly organized with the industry.

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