

# G-GUIDANCE CAREER GUIDANCE METHODOLOGY MANUAL

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Java Script



**G-Guidance**

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# Introduction



The main purpose at the base of G-Guidance, or, in other words, its mission, is to make career guidance better, by making it more dynamic, appealing, and adjusted to current day youths. To achieve our purpose, we imagined a career guidance method that could combine established and validated career guidance practices, based on well-known and scientific validated theoretical and methodological perspectives, with an innovative use of technology and digital tools.

From the beginning, our perspective on career guidance was to make it as close to youth's interests, needs, characteristics and favourite ways of communicating and learning as possible, to be able to make career guidance as comfortable, motivating, and familiar as possible. Or, in other words, to bring career guidance closer to their reality and more meaningful. From discussing the issue of career guidance with school psychologists that work with students in educational context every day, and with students themselves, as well as what we could find while doing an extensive review of literature on this subject, we noted that a lot of youths often find career guidance a boring, outdated process, from which they do not see themselves gaining any significant advantage. Whether because they find the materials uninteresting and outdated, because they don't address personal/individual issues that might influence their career decisions, or because they finish career guidance without knowing what they want and/or how to implement a career, there's a lot of reasons for students not to be engaged in career guidance.

From this starting point we developed the idea of integrating career guidance with

significant elements of youth's lives, to which they devote a lot of time to and use frequently every day, for a multitude of reasons and purposes, which are technology (namely in the form of computers and smartphones), internet (namely in terms of websites and social media) and gaming. These three elements are an important part of every youth's day, which they use to study, socialize, have fun, manage emotions and stress, communicate, solve problems, obtain information, among other uses. By having career guidance supported by these significant elements we believe it will make it more interesting and appealing for them and thus improving their motivation and engagement with career guidance. If students are motivated and engaged by career guidance activities, they will participate more and with a higher degree of quality, meaning that they will invest more of their efforts and time to fulfil career guidance objectives.

Another objective of our proposal was to give school psychologists better, updated and useful tools to perform career guidance with current day students, with which they can be more creative, to develop new career guidance materials as they need, collect, compile, and systemize relevant information about their students, and have an easy link to web-based resources that they can use. Without neglecting a big part of current good practices, we propose to enhance school psychologist's practice with new methodological tools.

As the digital web-based platform was built to suit the needs of career guidance, it allows for expansion besides the relevant career related information that provides while being used by students. This means that besides the vocational infor-

mation that will be included in the initial version of the digital platform, school psychologists and students can, throughout the career guidance process, add relevant (vocational) information, new games (e.g., quizzes), among other useful contents. This feature of the G-Guidance platform will allow school psychologists to continually edit, update and grow the vocational information, keeping it relevant for career guidance and students.

This manual contains the theoretical and methodological framework created to support the integration of technology and career guidance in a consistent and useful way. This framework represents an attempt to improve the good practices of career guidance of school psychologists, and not to replace those good practices with technology, as it is a well-known fact that the indiscriminate and inordinate use of technology in education context tends not to yield significant results. Thus, school psychologists can expect to recognize a variety of well-known career guidance techniques, with a technological twist. Although this manual explains in detail the theoretical and methodological base of our career guidance, it's important to note that, for future implementation and/or professional training, it's necessary to also read G-Guidance's "Training and Users' Manual", which is another manual that explores and details all the activities, tools and content that's only referred to in this one. These manuals complement one another, and both should be used to prepare future implementations of our career guidance. The same way that the present manual sets focus on the why we do career guidance this way, the "Training and Users' Manual" focus on the how to do it in the field. All the activities that are framed

in the career guidance sessions structure in this manual, are detailed in the "Training and Users' Manual", including detailed instructions about how to use G-Guidance digital platform, and how to integrate social media resources to promote parental engagement in career guidance, among other technical issues.

Our manual starts by introducing the base theoretical models of our methodology, which frame all the planning, organization, modules, and activities of career guidance, as well as the use of the G-Guidance platform. Bronfenbrenner's ecological model provides the professional with the wide perspective that's needed to fully understand the multitude of variables, from a micro to a macro dimension, from individual to a contextual dimension, involved in vocational development, career construction and decision-making. Having an ecological perspective allows psychologists to have a broader reach in terms of analysing career paths and decisions, as well as options to explore and develop the skills that students need to accomplish their career goals. Our platform is designed to facilitate that broader perspective, for example, by allowing teachers and parents to contribute with information about their students and children's skillset, interests, and qualities. Also, we believe that the ecological perspective provides an excellent match and base for Savickas's Life Design model of career guidance and Holland's Theory of Vocational Choice, which are two career guidance specific models used in our methodology. Savickas's constructivist model is, in our opinion, the most suited approach to career guidance, considering the chaotic and ever-changing nature of careers, job market and society that we have nowadays, as it focuses on adaptabil-

ity and preparing youths to deal with it, more than assigning them to a set specific career path. Savickas's model is also a good complement to Holland's more classic perspective, which focus more on matching the right personality and vocational profile with the optimal vocational context, as it provides students with the tools necessary to construct their careers, starting from the base provided by the vocational profile-vocational context match provided by Holland's approach.

After introducing the theoretical framework, the manual focus on the career guidance structure, comprising of five main dimensions (Self-Awareness, Vocational Profile, Career Exploration, Project Building & Decision Making, Career Maturity and Adaptability), that represent the path that the student goes through as he/she participates on the career guidance. These five dimensions are, in truth, a journey of self-knowledge, awareness, development and construction, undertaken by the students, supported by the psychologist, peers, teachers and family, with the goal of building a career path. The G-Guidance platform provides the roadmap of this journey, by setting the activities and tasks, and providing the necessary resources, by which the students can acquire the knowledge and the skills to achieve the ultimate goal. This journey is decomposed and translated into twelve sessions, each one with a set of career guidance activities and suggestions, that the school psychologist can use to support and guide the students towards their goal. Each session is presented in this manual individually, as well as in connection with the general structure of the career guidance methodology.

Afterwards, the manual focus on recommended measures of psychological as-

essment, chosen and built specifically to support our approach to career guidance, helping to collect important information to guide psychologists on their work, help students to gain awareness and self-knowledge on their journey, and to assess the career guidance efficacy in terms of student's career adaptability, decision-making skills and career construction skills. Besides describing thoroughly, the different measures to be used, we also frame them in terms of their relevance and usefulness for the career guidance process. The selected measures are available on the G-Guidance platform to be used (students can answer some of them directly on the platform) in different stages of the process, to support the construction of the student's career path, and to give school psychologists relevant information about their students.

Now, let's unwrap futures!

# 1. Main Concept and Objectives



To better introduce our perspective on career guidance, we believe to be important to present to the reader some of the main concepts that constitute key aspects of the methodology we're proposing in this manual. These concepts derive from the main theoretical models that support our methodology and, in a way, summarize what we believe are the most important points of each, for the way we envision career guidance for the future.

Our career guidance method's main objective is to address the difficulties and needs of school psychologists, mainly, but also student's, concerning the way career guidance is conducted in schools, making it more efficient, dynamic, fun, meaningful, useful, and up to date, by using well-known and used digital resources. This meant combining validated models and good practices, into an integrative method of career guidance, designed to facilitate the process and solve specific issues, such as the need to include educational agents with factual weight on students' career construction, like parents and teachers. The concepts that we present and discuss in this section of our manual are useful for readers to understand the connection between theoretical models and the intention behind it or, in other words, why do we do it this way. We believe that presenting these concepts first hand will make it clearer and easier for readers to understand why we chose certain perspectives, methods and activities, and to what purpose. Understanding the theoretical base will help professionals to use, expand and adjust their work on career guidance, to better suit the needs of their educational contexts and population.

After presenting the main concepts that

we believe are important for readers to understand the underlying logic of our career guidance method, we then focus on presenting the theoretical models at its base.

## ECOLOGICAL-SYSTEMIC MINDSET

According to Bronfenbrenner's Ecological-Systemic Theory (1977), human development is impacted by individuals' contexts or interactions between them. In the same sense, several well-known models of career guidance, as well as research, have also underlined the importance of educational agents, like parents and teachers, for vocational development and career construction (Schulenberg, Vondracek, & Crouter, 1984; Paa & McWhirter, 2000; Whiston & Keller, 2004). When we translate this influence that significant others can have over students' vocational development and career construction into practice, this means that any effective career guidance process should plan and implement strategies that help to include these elements, as much as possible, in the career guidance activities. This way the school psychologist not only better understands how much the students' preferences are influenced by their parents, but they can also use the motivational value of parental engagement with career guidance activities in their kids' own engagement and motivation to participate, which will, consequently, have a positive impact on the success and effectiveness of the whole process. The same logic applies to teachers' engagement with career guidance activities, as we know that the quality of the dyadic relationship between teacher and student is associated with

students' increased development overall, and vocational development specifically.

In this sense, it's easy to understand how the effectiveness of career guidance can be increased by including parents and teachers in the process, although with different roles concerning career guidance activities. Having this in mind, G-Guidance Project designed different ways by which these participations could be promoted, always having in consideration practitioners' feedback about how difficult it is to engage parents to participate in school activities (across different European countries), as well as engaging (overworked and overwhelmed) teachers into working in activities outside their work schedule. Thus, G-Guidance combined the development of a digital (G-Guidance) platform with an effective use of popular social media apps (Facebook and Instagram) to achieve the goal of engaging teachers and parents to actively participate on their kid's career guidance.

Through the smart use of digital tools and existing social media tools, students, teachers, psychologists, parents and even school board members can be linked and work as a whole or, in other words, as an effective system, to enrich students' career guidance, both cognitively (information, resources and decision-making) and emotionally (motivation, engagement, support, meaning). To this end, an important part of the first session of our career guidance process is to create private, closed, social media accounts for each class participating in career guidance and sharing them with their parents, as well as teachers. This way, all the work that's done by students in career guidance, can

be selectively posted in social media by the school psychologist, for parents and teachers to see, interact (by commenting and liking), contribute (with additional vocational information) and reinforce students' efforts. Through this easy and familiar communication channel, families will be able to monitor their kids' ongoing work of career guidance.

## CAREER GUIDANCE

Career guidance is a process comparable to a life journey, where individuals have an active role on constructing their career path and be successful and realized with it. In adolescence, career guidance focus on students' self-exploration, reflection and assessment, as well as finding new content, information and knowledge about different professions. Exploring all of these, adolescents will be able to reach their career potential (Savickas & Porfeli, 2012). To promote students career potential, G-Guidance Project has developed an intervention with 12 sessions, that will allow to explore the five main dimensions of career guidance process: (1) self-awareness, (2) vocational profile, (3) career exploration, (4) project building and decision making and (5) career maturity and adaptability (Savickas & Porfeli, 2012). G-Guidance career guidance sessions were designed to give professionals, namely school psychologists, practical guidelines that they can follow, to be able to cover all the important points in each of the five main dimensions throughout the process. It's important to note that although the 12 sessions structure is clearly presented, with specific activities and instructions, the whole design was planned, from the beginning, to be

flexible enough to allow professionals to adjust and adapt career guidance to their students, resources, school context, social context, among other contextual factors. G-Guidance's awareness of the great and increasing diversity of students, educational agents, families and communities surrounding and embedded in current day educational contexts across Europe, demands an updated and flexible method of conducting career guidance, as well as well-prepared professionals, which includes the mindset and ability to adjust and adapt career guidance as necessary, having in mind the said diversity, without losing focus and efficacy.

To achieve the goals proposed by G-Guidance career guidance, both students and school psychologists must have an active mindset and attitude throughout the process, for the career guidance sessions and activities to fulfil their purpose. The same should be said about the important contributions that families (namely parental figures) and teachers can give to the process, widely supported by research on career guidance, that also implies that an active role should be played, accordingly with the different roles that each have, by teachers and parental figures. A proactive, engaged, cooperative, and extended (beyond the classroom) career guidance is much closer to making a real positive impact on kids' ability to design, build and follow through on a career choice.

## CAREER CONSTRUCTION (LIFE DESIGN)

Career Construction Theory see every individual as an actor, an agent and an author about his/her own career (Savickas, 2013). This means that people are no lon-

ger only competent to perform a single and exclusive profession, but they develop their Self and adopt certain behaviours to build their own professional career. In turn, this career must be adjusted to their lives, interests and activities and not the opposite (Savickas, 2013). Because G-Guidance Project sees is students as active learners and authors of their lives, we developed several activities that will allow students to be active participants in the construction of their (vocational) self and their vocational profile (e.g., "Vocational Profile Video" or "Who am I?" activities). This way, students will use their personal characteristics and vocational interests as building blocks for the construction of their careers.

Basing our career guidance on the basic principle that students should be active builders of their career path means that we took great care to use the best tools and content, considering their needs and characteristics, to motivate them to actively participate in the process. Thus, our efforts in creating tools like the G-Guidance digital platform, complete with multimedia content and gaming features, as well as the integration of social networks (e.g., Facebook and Instagram), to capitalize on their motivational potential, both for students and parents, to be the most active possible in career guidance. This means that most of the method, tools, activities and contents created for career guidance by our project aimed to make students aware that their careers are an ongoing building project, and to motivate them to take the necessary steps, complete the necessary tasks and achieve important milestones, to be able to materialize their career plans and aspirations.

With what was said above in mind, it's also important to underline that the role that school psychologists play on this process is essential for it to be effective and fruitful, as the tools and contents, by themselves, are of limited usefulness. This implies that school psychologists should see themselves as co-builders of the students' careers and strive to use the tools and contents created by our project to:

- communicate more and better with students;
- provide more and better feedback to students about their career guidance activities;
- engage and motivate students, parents and teachers to work collaboratively in career guidance;
- use the materials provided (as well as the material created by the students from career guidance activities) to make career guidance more meaningful and useful for students, by actively using it in career guidance sessions and activities.

## CAREER EXPLORATION

Career exploration can be theoretically defined as a set of intentional cognitions and behaviors adopted by an individual aiming to collect information about the professional world, such as information's about certain professions, jobs and companies (Stumpf, Colarelli & Hartman, 1983). Also, this process can be analyzed by considering four aspects: "(1) where one explores, (2) how one explores, (3) how much one explores, and (4) what one explores" (Stumpf et al., 1983, p. 192). Which means that career explo-

ration should be intentional, well-planned and the most adjusted as possible to students' needs and profile, to provide them with the most useful career related information in a way that is relevant and meaningful. To this end, our project created the G-Guidance Professions Guide, with the objective of providing students realistic, useful and relevant information about more than 50 professions, in a multimedia format, that combines textual information with video interviews of selected professionals and a wide variety of career relevant websites. For career exploration to be meaningful and motivating for current day students, it must be adjusted to their most used means of communication, sources of information and format, which means using tools that go beyond the conventional paper printed information. It includes not only different information formats, such as multimedia resources, but also the means by which that information is gathered by students, moving from an expositive approach to a project-based, experiential, approach. Also, and for motivational purposes, G-Guidance digital platform also allows students to perform career exploration through gamified activities, with the objective of making those activities more challenging, motivating, fun and engaging for them. For this end, G-Guidance team created at least one career exploration activity for each profession described on the Professions Guide.

G-Guidance's method for career guidance highly values career exploration activities, as they are essential for an effective intervention. Research shows that career exploration behaviors are predictors of lower levels of career indecision (Park, Woo, Park, Kyea & Yang, 2017), which means that the more successful career

exploration is, the more prepared students will be to build their careers and make the best career related decisions. Career exploration behaviors are important for career building because the more (relevant) information students gather, the more conscientious they will be about all the variables and dimensions that are relevant and important to mind in their decision-making about career choices, and more capable they will be to deal with unpredictable events. In other words, career exploration promotes career adaptability (Savickas, 2013).

Considering the importance of career exploration activities, school psychologists should be as supportive as possible and motivate students to engage and invest in performing the different career exploration activities included in the G-Guidance platform and manual. Concomitantly, school psychologist should also look to increase and improve the basic set of career exploration activities provided by G-Guidance project, with more activities, ideally adjusted and adapted to their specific group of students, in their specific school context and community, as different schools and students have different needs for career related information. To allow school psychologists to improve their career exploration activities, the G-Guidance platform offers a simple interface that allows them to create new content, new activities, that will be available to students when they log in to the platform. Empowering, enabling and increasing the reach of school psychologists and career guidance in schools was always, from the beginning a main objective of our project, which is why our tools and content was designed to be constantly updated by professionals and special-

ists, allowing for a constantly updated career exploration

## CAREER ADAPTABILITY

When we adopt career adaptability concept instead of career maturity, we start to perceive career guidance as a life-span process. This concept was proposed by Savickas (1997) and is defined as the capacity of an individual to easily adapt or change in response to unpredictable situations in his/her career. This concept also refers to the individual ability to carry out professional tasks and participate in his/her work environment. G-Guidance's career guidance method aims to promote career adaptability in students, so they can be prepared for present and future career related challenges and barriers. In a fast-changing work-market, as the current one, it's fundamental that students feel ready, competent and confident that they can deal with whatever challenges they might face along their career paths. This confidence greatly improves their ability to make good decisions and cope with the inevitable stress associated with change and development.

According to Savickas (1997, p. 254), "adaptability, whether in adolescents or in adults, involves planful attitudes, self- and environmental exploration, and informed decision making". So, it seems essential to promote students' self-awareness and their attitudes towards career exploration, in order to help them make conscientious career decision and prepare them for adversities. To do so, G-Guidance Project designed specific activities that demand that students project themselves in the real work-market reality, considering the pros and cons of life as a profession-

al on a given career, considering the path that must be taken to reach that goal. Activities like the one labeled “Vocational Detective”, that seeks to ask students to plan a possible career, considering different academic paths, academic results, facilitators or impediments and even their personal interests and vocational values, are an example of how we propose to promote career adaptability in our students.

As before, school psychologists have an essential role to play on this regard, as their ability to motivate students to invest, engage and acknowledge the importance of performing these activities, is decisive.

## DIGITAL RESOURCES & GAMIFICATION

Nowadays we’ve been seeing an increasing interest about gamification and how digital resources can be used as pedagogical methods and well-being promoters. For example, on well-being field, Lahtinen and colleagues (2021) explored how an app-based mindfulness practice could impact university students and staff. Their findings suggest that when higher education students practice mindfulness through an app, they reduce their levels of stress and depression.

Understanding which advantages gamification can bring to educational contexts is important, to be able to capitalize on that potential. In recent investigation results suggest that gamification has a significant positive effect on students’ academic performance for three reasons:

- 1) it promotes goal setting and consequently students’ persistence on a task (Locke & Latham, 2002, as cited in Bai,

Hew & Huang, 2020);

- 2) it leads to recognition when students conclude their tasks, which stimulates them to continue to respond and participate;

- 3) it provides quick feedback, which improve students’ feeling of competence satisfaction, enjoyment and performance (Landers et al., 2015, as cited in Bai et al., 2020).

Considering this information, G-Guidance platform design includes gamification mechanisms, namely hierarchical levels, XP (students’ score) and increasingly complex tasks, among others features. Also, through our platform teachers and school psychologists can easily access to students’ responses (e.g., written documents, collages, videos) and give them quick and personalized feedback. So, we believe that our platform, by its design and use of gaming elements, increases the interactions between psychologists and students, as well as with other important agents, like teachers and parental figures, and consequently increases students’ motivation and curiosity towards career guidance process.

Regarding social media, it can also be a powerful digital resource. According to Galvin and Greenhow (2020) some teachers have been successfully using social media to engage their students on written activities. Results show that social media use improves students’ motivation about writing and their performance. Additionally, social media allows students to establish connections with the real world. Based on recent evidence like this, G-Guidance suggests using social media and networks to overcome a traditional difficulty in

school communities everywhere, which is to promote a more significant, effective and active participation of families and teachers on students' career guidance. The suggestion of creating a social media private account (e.g., Instagram), for each group of students (class) aims to involve students' families in their kids' career guidance process and take advantage of this digital resource.

Digital resources and gamified activities are an important feature of our proposal for career guidance, as they complement and increase the reach and effectiveness of the school psychologists' work in this process. But it's important to note that it does not replace the fundamental role that the professionals play in making these resources an asset for the whole career guidance process, as they need to have a clear objective and usefulness, considering not only the objectives of career guidance, but also the profile and needs of students and their families, to effectively make a difference in the success of the intervention.

## EVIDENCE-BASED INTERVENTION

Cournoyer and Powers (2002) argued that evidence-based practices have two inherent and fundamental principles:

(1) professionals' practice should be guided by previous findings, which prove that certain practice will have positive impact and bring benefits for specific clients;

(2) every client should be evaluated to understand if professional' practice is having predictable results.

Having this in mind, G-Guidance project design was intentionally based on theoretical frameworks that have already demonstrated to be effective on career guidance development and process, such as Hollands' Theory (Holland, 1996) and more importantly Savickas' Life Design Theory (Savickas et al., 2009).

On this subject, Kratochwill and Shernoff (2004) also suggested five strategies that school psychologists can follow to successfully implement evidence-based interventions (EBI) in school/educational contexts. Our project's team tried to guide the design of G-Guidance career guidance method, accordingly with the following aspect, in an attempt to guarantee the most effective practice possible, with the highest possibility of making a positive impact on students, teachers and families:

- First strategy: "Developing a practice-research network in school psychology" (p.37) - this means that is important to bring together a group of experts who research about practices that must be implemented to achieve a certain objective. To carry this strategy, G-Guidance Project constituted a team with school psychologists and researchers, but also with important school elements, like board members and teachers.
- Second strategy: "Promoting research on the efficacy and effectiveness of EBIs" (p.37) - this means that is important to evaluate the efficacy or effectiveness of any intervention, to ascertain if it's causing the effects for which it was create. With this in mind, our career guidance design includes a set of measures, carefully chosen to

assess the effects of the process on students' self-awareness, readiness to engage in career building tasks and activities, and knowledge about career related information. These measures are available for school psychologists, through the G-Guidance platform, as well as in this manual, to use on their career guidance intervention. It's important to note that these measures were chosen among many scientifically validated career guidance instruments. The instruments chosen for G-Guidance were chosen by their relevance and adjustment to the characteristics and features of our methodology, by their adjustment to the target audience (students), because of the strength of their validation studies, because they were translated, adapted and validated in every language of the project's consortium, and because they are easy to use and well-known to school psychologists.

- Third strategy: "Establishing guidelines for implementation and evaluation of EBIs by practitioners" (p.40) - which means that an intervention must be described carefully and extensively so that professionals can apply it. Our project created the G-Guidance Training and User Guide, where we've tried to follow this premise and explain all procedures that must be followed to successfully implement our project. Which means that G-Guidance's method, materials and content can easily be used by school psychologists to implement and replicate the intervention, although with the necessary adjustments to target population and con-

texts.

- Fourth strategy: "Creating professional development opportunities" (p.43) - this suggests that is essential to promote professionals' skills, competences and knowledge, so they can be able and capable of implement interventions. Throughout the development and implementation of G-Guidance Project, we recognized the importance of this aspect and created close communication channels, to promote proximity and frequent interaction between practitioners, namely school psychologists and teachers, and researchers responsible for outlining the intervention. This way, it was possible to share knowledge and experiences from all relevant agents and design an ecologically valid intervention structure with a higher probability of being successful. Also, our career guidance method, by design, incentives the continuous improvement of the G-Guidance platform with updated information about careers, which will promote professional development of all agents involved in the intervention.
- Fifth strategy: "Collaborating with other professional groups" (p.45) - EBIs request a collaborative work between different professional groups. G-Guidance Project is, by nature, a collective of professionals from different fields, working towards a more efficient way to perform career guidance. We believe, since the beginning that an efficient career guidance should include different professionals, namely school psychologists, teachers and school

board members, besides all the professionals represented by the students' parents, that can have an important role in enriching the school's career guidance activities. All the outputs of G-Guidance were the result of the efforts of a team constituted by school psychologists, researchers, teachers, school directors and software developers. Having this in mind, our career guidance methodology highly recommends the inclusion, with well-defined and strategic roles, of professionals from different fields, to improve the quality, diversity, validity and interest of all aspects related to the process, from materials to activities and opportunities to explore and expand beyond the school grounds, into the community.



## 2. Theoretical Overview



## 2.1. Bronfenbrenner's Ecological Systems Theory of Development

Around the 1970s, Bronfenbrenner developed the Ecological Systems Theory, with the aim of explaining the impact that different environments and the dynamic interaction between them can have on children's development. According to the author, there are five systems that can significantly impact human development. These systems are interrelated – more complex systems include simpler systems that are closer to children; and are organized taking into account the degree of influence on the developmental process. Therefore, the system closest to the child is the microsystem, followed by the meso-system, the exosystem, the macrosystem and finally the chronosystem (cf. figure 1).

Going deeper into the definition of each of the systems, the microsystem is considered to be the closest to the child. In it, children establish direct and bi-directional relationships with their parents, siblings, peers, teachers, doctors and/or neighbors. Bi-directional relationships presuppose the existence of reciprocity, which means that children have an impact on the people they come into contact with and vice versa (Bronfenbrenner, 1977). In this sense, the child is seen as an active participant in the construction of their environments / contexts (Christensen, 2016). Because it is the closest system, it is also the one with the greatest capacity to influence the child's behavior, actions and thoughts.

The microsystem also encompasses a set of activities, roles and interpersonal relationships that the child experiences in

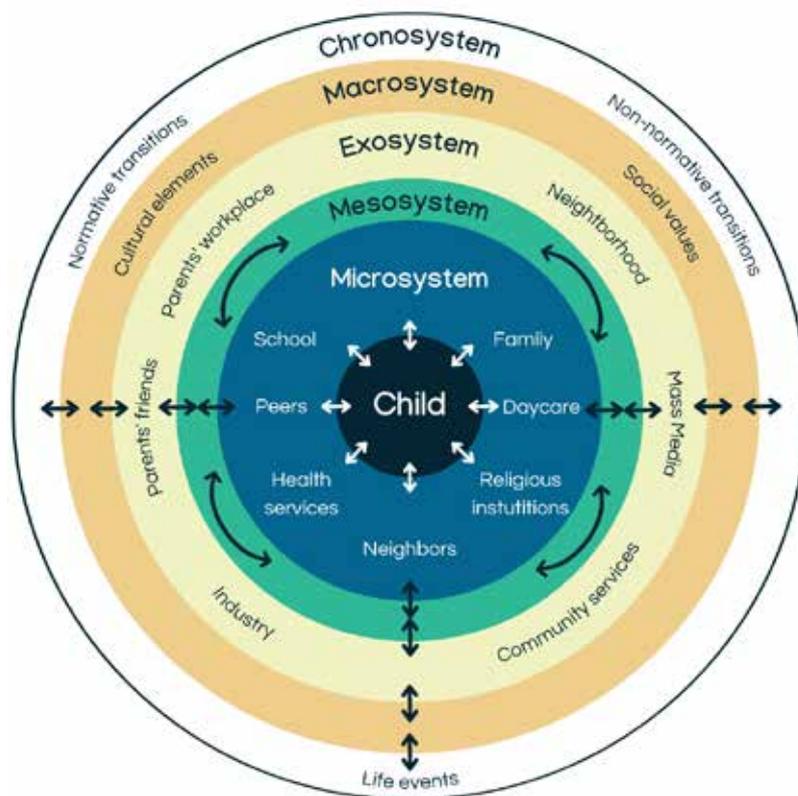


Fig. 1. Heart of Bronfenbrenner's Ecological System Theory (adapted from Guy-Evans, 2020)

face-to-face contact with a person with characteristics different from their own (e.g. beliefs, personality and/or temperament) or with an object with specific characteristics. The three elements mentioned above are essential for a child's overall development. She needs to develop increasingly complex activities, regularly and preferably with people with whom she establishes a strong and mutual emotional connection (Bronfenbrenner, 2005).

Regarding the activities, these can be molecular or molar. Molecular activities are instantaneous and involve no intention. On the other hand, molar activities are continuous in time and imply intention/motivation, that must be shared among all the participants in a certain environment, where the activity takes place (Bronfenbrenner, 1979).

About the roles, these are defined as the set of activities and relationships that a person of a certain social position is expected to have. For example, if a child is considered the best student in the class, he is expected to be studious, organized and with an assertive behavior.

Finally, regarding interpersonal relationships, Bronfenbrenner (1979) explains that the basic unit of relationships is the dyad – a relationship established between two or more people, such as a child-mother, child-teacher or child-child. The main characteristics of a dyad are reciprocity, balance of power and affective relationship. Furthermore, Bronfenbrenner (1979) mentions three types of dyad: (1) observation dyad – when one person pays attention to what the other is doing and the latter perceives it and responds; (2) joint activity dyad – all participants are aware

that they develop an activity together; (3) primary dyad – when the relationship between the participants continues to exist even in the absence of one of them, through thoughts and feelings that they nourish for each other. The primary dyad is considered the most complex, but also the one that will impact the child's development the most.

The mesosystem is characterized as the system in which interactions between microsystems occur. For example, the mesosystem may include school-family microsystems, explaining how an event in the family impacts a child's development at school and vice versa, how an event at school impacts a child's development at home.

The exosystem contains formal and informal social structures, which do not directly involve the child, but could impact at least one of their microsystems. Examples of exosystems are the parents' job, the neighborhood, the parents' friend groups, and even the media. Let's imagine that the child's mother and her boss argue in the workplace. This event can make the mother not so available to the child, which in turn affects the child's development.

The macrosystem refers to cultural elements and societal values that child contacts. The culture you are immersed in can influence your thoughts, behaviors and actions. In addition, the macrosystem can also relate to the child's socio-economic level, geographic region and ethnicity. For example, children from different world continents have completely different lifestyles.

The chronosystem includes all life events

that may impact human development in some way. It includes normative transitions such as starting school, puberty and marriage; but also, non-normative transitions, such as the divorce of the child's parents, the emergence of a serious illness or moving to another city/country. The chronosystem then explains the cumulative effects that transitions have on the child's life course (Bronfenbrenner, 1986).

### 2.1.1. Ecological Systems Theory and Career Guidance

After a brief description of Ecological Systems Theory, it is important to understand how it is applied within the scope of career guidance in general, and G-GUIDANCE Project's approach to career guidance, specifically. Firstly, considering that microsystems are the ones with the greatest impact on human development, our project decided that most of its interventions would take place in the school microsystem. In this sense, through the dyad between teacher-students or psychologist-students, it will be possible to promote vocational development and career construction processes of students. Additionally, some activities involve peer work, which means that student-student dyads will also contribute positively for each student's career guidance. However, and understanding that the family is the most important microsystem in children's development (Bronfenbrenner, 1986), it was important to include activities that promote student-parent/student-sibling dyads (e.g., extension activities that are suggested that students execute with their families' help, like the "Family Tree of Profession" activity). Additionally, with

the aim of strengthening students-teacher dyads, or students-psychologist dyads, we developed a digital platform with different activities, that promotes and incentives interaction and cooperation towards the execution of career exploration activities. In this regard, it was always our objective that the digital tools and platform created and/or used would promote interpersonal relations and not to override them. So, our project uses digital tools not to replace the role and functions of important dyads, but to stimulate them and increase the number and quality of interaction experiences between students-teacher and/or students-psychologist.

Regarding the mesosystem and recognizing that the way the family and the school relate, impacts the child's development in both contexts, the G-GUIDANCE Project proposes to create class profiles on social networks, so that throughout the intervention students, together with teachers and/or psychologists, who are accompanying the process, can share the products of the sessions (closed and secure) social media, where these can be seen and discussed by and with families. Thus, it is expected to promote a close relationship between family and school, using available digital resources, which will enhance students' vocational development and career construction.

Although G-GUIDANCE Project does not intervene directly with the exosystem, it is still essential to justify its importance in the vocational development of students. Parents, frequently, have biased beliefs, opinions and prejudices towards certain careers and professions, which are to be

expected, due to social and cultural values and norms. One of them, for example, is to always privilege higher education above any other alternative career path. These opinions, beliefs, prejudices and stereotypes are, normally, transmitted and reinforced socially, namely within the parents' social groups (e.g., parents' friends). Although it might not be apparent, these opinions can be decisive on influencing parents to block certain career paths and career decisions of their kids. Having this in mind, G-GUIDANCE developed activities like "Myths & Truths", which aims to demystify some of these stereotypes and biased information about careers, not only with students, more directly, but also their parents, indirectly, as they check out their kids work on social media.

Regarding the macrosystem, the G-GUIDANCE Project will be implemented in five countries (Portugal, Spain, Bulgaria, Greece and Italy), so it is expected that each school context and class have different perspectives, values and vocational interests, depending on the country and culture in which it included. In order to respect the cultural and social values of each school and class, this project allows, and recommends, that certain activities from the career guidance structure to be adapted, to better respond to the needs and interests of each group of students. Moreover, our project values the impact of all communities on students' career construction, as students will have to continuously build their careers within a society and community that implies a set of social and cultural beliefs and attitudes towards professions, that they will have to include in their decision-making process. Any oth-

er approach to career guidance, in our opinion, would only make students' career related decisions less realistic, effective and more prone to be inconsistent and eventually leading to less successful career paths. With this in mind, G-Guidance team designed and developed a digital platform that helps the school community (namely students, teachers, psychologists and board members) to be connected, share information and work towards adequately integrating social and cultural issues associated with careers and professions. With the same objective, our career guidance method recommends psychologists to create and use private social media accounts, to involve parents and give them the opportunities to contribute for their kids' career guidance by helping to deconstruct myths and stereotypes associated with certain professions, giving a more realistic account of those professions. At the same time, this dynamic will also help school psychologists to intervene with parents that might themselves have social and cultural bias towards a certain profession, that might be a barrier to their kids' career construction.

Finally, on the chronosystem, the G-GUIDANCE Project recognizes that the life events of the students can impact their global, individual and vocational development, so it suggests that the coordination and global management of career guidance should always be executed by a certified psychologist, so that it can respond to specific issues that might arise.

## 2.2. Holland's Theory of Career Choice – RIASEC Model

John Holland (1996) is responsible for the development of the RIASEC Model. According to this model, there are six personality types and work environments, which are: Realistic, Investigative, Artistic, Social, Enterprising and Conventional (cf. figure 2). The premise behind the model is that the greater congruence between a person's personality and their type of work environment, the greater the motivation and satisfaction with their job. Additionally, the person will be more efficient and successful in their professional career.

Exploring each personality types, for Holland (1996) the personality of an individual should be characterized taking into account their preferred activities, their values, the way they see themselves, the way others see them and the activities they avoid. In this sense, a person with the Realistic personality is someone who likes to manipulate objects, machines and/or tools. She/he also values material rewards for accomplished goals and sees herself/himself as someone competent in mechanical and/or manual activities, as practical, conservative and can avoid activities that involve interaction with others, which reflects some difficulties in terms of so-

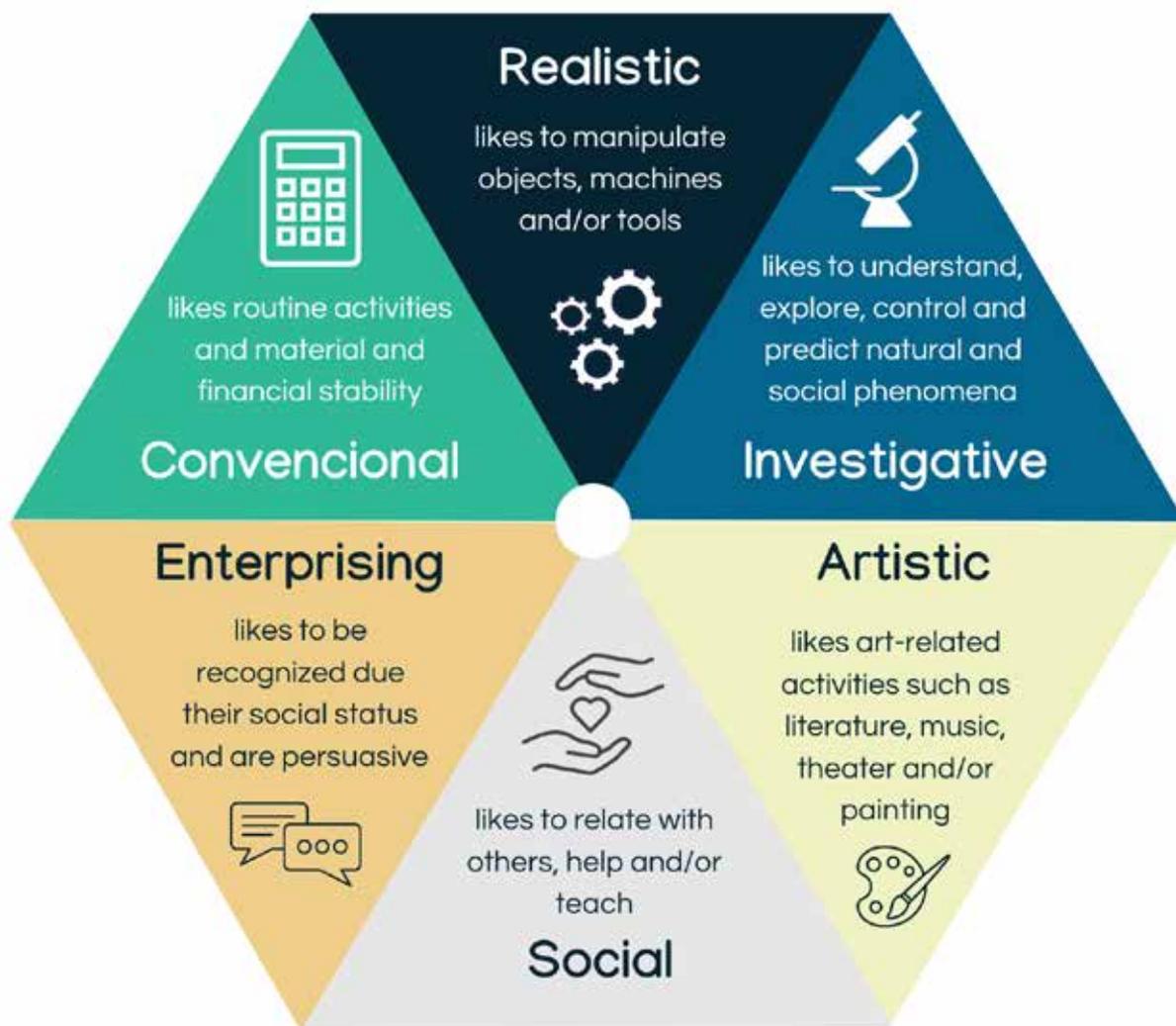


Fig. 2. RIASEC Model

cial skills. The population tends to consider realistic people to be frank.

About the Investigative personality, these people like to understand, explore, control and predict natural and social phenomena. To this end, they value the development of knowledge in areas of their interest and perceive themselves as intelligent, academic and analytical. On the contrary, they do not like activities that involve persuasion or selling something and may demonstrate difficulty in terms of interpersonal skills. Others see them as less social and intellectual.

People who love art-related activities such as literature, music, theater and/or painting are considered to have an Artistic personality. These people value their ability to express what they feel creatively, seeing themselves as innovative and open to the new/unknown. They are often seen by the community as creative, but also alternative, disobedient or conflicted, as they do not like activities that involve routines or very strict rules.

Regarding the Social personality, individuals who fit into this personality like to relate to others, help and/or teach. Therefore, they value social well-being and use their interpersonal skills, such as empathy, to achieve it. They are seen by people as outgoing, pleasant and devoted. They do not like activities related to machines, which presuppose some difficulties in terms of technical skills.

With regard to people with an Enterprising personality, they are persuasive and value the recognition of the social status they assume, as well as the acquisition of material belongings. They are often associated with activities involving sales and

others see them as energetic. On the other hand, they do not like scientific activities.

Finally, individuals with a Conventional personality like routine activities that give them material and financial stability. In addition, they value the fact that they have a role in social, political and business areas. Despite having a lot of business skills, they don't have as many artistic skills and don't like unplanned or ambiguous tasks. People characterize them as cautious.

Having analyzed the personality types, it becomes necessary to explore the types of work environment a little more. According to Holland (1996), work environments can be identified taking into account the requirements it asks for, the tasks and rewards it demands/provides, the values or forms of expression present in the place and the activities that are involved. Therefore, Realistic environments require their workers to have manual/technical/mechanical skills and to be practical. They value productivity, people who take risks and are robust, to work with tools, machines, among other practical activities.

In turn, work environments in the Research area require analytical and scientific skills, so that it is possible to solve problems and write reports about new acquired knowledge. In this sense, these environments value professionals who seek to increase their knowledge/skills through academic study and research. The activities are mostly of an intellectual and scientific nature, putting knowledge at the disposal of practice.

Artistic work environments require and value creativity, the ability to innovate and express feelings/ideas through differ-

ent forms of art, such as music, painting, sculpture, among others. Most of the activities developed in these environments are creative and involve, for example, writing books, producing music and performing dances.

The Social work environment is the one that seems to require more interpersonal skills, since it values concern and interaction with others. Thus, people who work in these environments must be empathetic, sociable and friendly, so that they can teach, care for or mentor others, in order for them to reach their potential.

About Enterprising work environments, these imply persuasion skills, ambition to achieve goals and self-confidence. The professionals in these environments must be responsible and committed to the objectives of the companies. Examples of professional activities in these environments are selling a product, manipulating others to adhere to a service, or persuasion to win a case.

Last but not least, the Conventional work environment requires organizational skills, the ability to follow a routine and the ability to act in accordance with what is required by the company. The activities of these professional environments are often related to the work of organizing machines, numbers or objects.

### 2.2.1. Holland's RIASEC Model and Career Guidance

To defining six personality types and six types of work environments, Holland (1996) also introduces the concept of vocational identity. According to the author, when an individual recognizes what he likes to do, what are his interests and his goals, he is more predisposed to seek/accept jobs that satisfy his needs, revealing a high vocational identity. But when can vocational identity be explored? For Holland (1996) the exploration of vocational identity should not only correspond to the moment of transition from the academic world to the professional world. Vocational identity must be explored throughout the school journey and even started in childhood. In addition, this exploration should also occur at times such as changing jobs, dismissal or retirement.

In addition, the Holland's Theory can be summarized into four assumptions:

- First assumption. Holland believes that people can be categorized according to six personality types (Realistic, Investigative, Artistic, Social, Enterprising and Conventional, known by the acronym RIASEC).
- Second assumption. Each personality type has a different set of abilities, interests, and characteristic personality traits. This set creates an atmosphere and a situation that correspond to each of the personality types, called the work environment. A work environment presents both problems and opportunities, typically dominated by a specific type of personality.
- Third assumption. People will try to find work environments that allow

them to use their particular skills, express their attitudes and experience satisfaction.

- Fourth assumption. People will behave as a result of an interaction between the personality of an individual and the characteristics of his environment.

Building upon RIASEC model and the main concepts proposed by Holland (1996), G-GUIDANCE project developed its model of career guidance focused on intervention with adolescents aged between 13 and 17, with the aim of promoting the exploration and development of their vocational identity. G-Guidance career guidance starts from an initial vocational profile, from which every student will start building their career paths, by doing the career exploration activities included in G-Guidance's structure of sessions. This initial vocational profile should be based on key elements of student's most important and relevant characteristics, as the initial profile will be the base for the work that students will do throughout the process. We considered that Holland's model was an ideal framework to base our career guidance process, namely because of widely validated and accepted structure of six work environments (RIASEC). Based on the six original types of work environments proposed by Holland initially, we created six vocational profiles for G-Guidance, that compose the initial vocational profile, which is the first step on G-Guidance career guidance: CREATOR, RESEARCHER, CREATIVE, ALTRUIST, LEADER and ORGANIZER

To reach the initial vocational profile, students must answer the G-GUIDANCE QUESTIONNAIRE, which is a vocational areas questionnaire, based on Holland's RI-

ASEC questionnaire, that the project's team adapted, updated and expanded, to serve the purposes of our career guidance method. The results from performing the G-Guidance questionnaire, which can be done directly on G-Guidance platform by the students, gives every student an initial vocational profile, that is shown and explained in the G-Guidance digital platform, and help to organize the career exploration activities that students should perform to gradually build up their career paths. More than define which area(s) students should decide to follow, the vocational profile obtained by the G-Guidance questionnaire sets the beginning of the journey of self and career exploration.

The following tables (see tables 1 to 6) gives a detailed description of G-Guidance's six vocational profiles and their connection to Holland's (1996) RIASEC structure.

Table 1. Vocational Profile Maker

<h2 style="text-align: center;">Maker</h2> <p style="text-align: center;">(Related to Holland's "Realistic type" - R)</p>					
<p>Likes to work with animals, tools, or machines; generally, avoids social activities, such as teaching, healing, and informing others; has good skills in working with tools, mechanical or electrical drawings, machines, or plants and animals; values practical things one can see, touch, and use, such as plants and animals, tools, equipment, or machines; and sees self as practical, mechanical, and realistic</p>					
Typical Professions	Personality traits	Skills	Activities/Interests	Work environment	Values
Airplane mechanic; Car mechanic; Carpenter; Truck Driver; Plumber; Construction Supervisor; Electronics; Repairman; Mechanic Engineer; Farmer; Electrician; Helicopter; Pilot; Machinist (e.g. train, forklift, crane); Construction worker; House painter;	Practical; straightforward/frank; mechanically inclined; stable; concrete; reserved; self-controlled; independent; ambitious; systematic; Realistic; Sensible; Mechanical; Traditional; Down-to-earth;	Working with tools; mechanical drawings or machines; work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials	Practical things one can see, touch, and use; things you can build or make better; tinker with machines/vehicles; be physically active; use your hands; build things; tend/train animals; work on electronic equipment; like wood, tools, and machinery; fix electrical things; solve electrical problems; pitch a tent; play a sport; read a blueprint; plant a garden; operate tools and Machines; Building; Repairing; Taking Action; Using Machines; Using Tools	require working outside, and do not involve a lot of paperwork or working closely with others;	practical, mechanical, and realistic; Practicality; Productivity; Structure; Independence;

Table 2. Vocational Profile Researcher

<h2 style="text-align: center;">Researcher</h2> <p style="text-align: center;">(Related to Holland's "Investigative type" - I)</p>					
<p>Likes to study and solve math or science problems; generally avoids leading, selling, or persuading people; is good at understanding and solving science and math problems; values science; and sees self as precise, scientific, and intellectual</p>					
Typical Professions	Personality traits	Skills	Activities/Interests	Work environment	Values
Software Developer (Programmer); Biologist; Astronomer; Civil Engineer; Anthropologist; Chemical ; Engineer; Researcher (science, technology, engineering, mathematics); Bio-medical Engineer; Veterinarian; Medical Doctor (all specialties); Architect; Physicist; Researcher (social sciences, education, humanities, economics); Environmental Engineer	Inquisitive; analytical; scientific; observant/precise; scholarly; cautious; intellectually; self-confident; Independent; logical; complex; curious	skills at	involve working with ideas, and require an extensive amount of thinking; searching for facts and figuring out problems mentally; . explore a variety of ideas; work independently; perform lab experiments; deal with abstractions; do research; be challenged; researching; Experimenting; Theorizing; Analyzing; Problem-Solving.	scientific laboratory; working alone; The preferred work	Values science, and Sees self as precise, scientific, and intellectual; Discovery; Understanding; Logic; Independence; Intellect

Table 3. Vocational Profile Creator

<h2 style="text-align: center;">Creator</h2> <p style="text-align: center;">(Related to Hollingshead's "Artistic type" - A)</p>					
<p>Likes to do creative activities, such as art, drama, crafts, dance, music, or creative writing; generally avoids highly ordered or repetitive activities; has good artistic abilities in creative writing, drama, crafts, music, or art; values the creative arts and likes drama, music, art, or the works of creative writers; and sees self as expressive, original, and independent</p>					
Typical Professions	Personality traits	Skills	Activities/Interests	Work environment	Values
Poet; Musician (all types of music); Dancer (all types of dance); Actor/ Actress; Writer (e.g. novels, sci-fi, horror, fantasy); Movie Director; Journalist; Artist; Singer; Composer; Museum Curator; Photographer; Cartoonist; Entertainer (e.g. comedy, youtube, radio, Tv Shows)	expressive, original, and independent; creative; imaginative; innovative; unconventional; emotional; introspective; impulsive; sensitive; courageous; complicated; idealistic; non-conforming	artistic abilities - in creative writing, drama, crafts, music; require self-expression; sketch, draw, paint; play a musical instrument; write stories, poetry, music; sing, act, dance; design fashions or interiors	working with forms, designs and patterns; attend concerts, theatre, art exhibits; read fiction, plays, and poetry; work on crafts; take photography; express yourself creatively; deal with ambiguous ideas.	work can be done without following a clear set of rules; work in places like painting, museums, auditoriums, music studios.	values the creative arts; Originality; Creativity; Freedom; Individuality; Flexibility

Table 4. Vocational Profile Helper

<h2 style="text-align: center;">Helper</h2> <p style="text-align: center;">(Related to Hollingshead's «Social type» - S)</p>					
<p>Likes to do things to help people, such as teaching, nursing, giving first aid, or providing information; generally avoids using machines, tools, or animals to achieve a goal; is good at teaching, counseling, nursing, or giving information; values helping people and solving social problems; and sees self as helpful, friendly, and trustworthy.</p>					
Typical Professions	Personality traits	Skills	Activities/Interests	Work environment	Values
School Psychologist; Sociologist; High School Teacher; Health and Clinical Psychologist; Juvenile Delinquency Expert (Criminology); Speech Therapist; Preschool Teacher; Human Resources Manager; Occupational Therapist; Social Worker; Sports and Physical Education Teacher; Marketing; Public Relations	helpful, friendly, and trustworthy; helpful; idealistic; insightful; outgoing; understanding; cooperative; generous; responsible; forgiving; patient; kind; Compassionate; Generous	skills at teaching, counseling, nursing, or giving information; teach/train others; express yourself clearly; lead a group discussion; mediate disputes; plan and supervise an activity; cooperate well with others	working with, communicating with, and teaching people; helping or providing service to others; work in groups; help people with problems; do volunteer work; work with young people; serve others; Counseling; Assisting; Advising; Teaching; Providing Service	work in places like hospital, school, or counseling service; The preferred work environment encourages teamwork and allows for significant interaction with others.	Values helping people and solving social problems; Cooperation; Service; Altruism; Connection; Empathy

Table 5. Vocational Profile Leader

<h2 style="text-align: center;">Leader</h2> <p style="text-align: center;">(Related to Holland's «Enterprising type» - E)</p>					
<p>Likes to lead and persuade people and to sell things and ideas; is good at leading people and selling things or ideas; values success in politics, leadership, or business; and sees self as energetic, ambitious, and sociable</p>					
Typical Professions	Personality traits	Skills	Activities/Interests	Work environment	Values
<p>Economist; Marketing and Advertising Manager; Hotel Manager; Financial analyst, General Finance; Accounting; Business</p>	<p>Extraversion, Intuition, Thinking, Judgment; take control of life with an eye toward the future ; energetic, ambitious, and sociable; self-confident; assertive; persuasive; energetic; adventurous; popular; ambitious; agreeable; talkative; extroverted; spontaneous; optimistic</p>	<p>Is good at leading people and selling things or ideas; initiate projects; convince people to do things your way; sell things; give talks or speeches; organize activities; lead a group; persuade others</p>	<p>involve starting up and carrying out projects; leading people and making many decisions. Sometimes they require risk taking and often deal with business: make decisions; be elected to office; start your own business; campaign politically; meet important people; have power or status; Managing; Deciding; Strategizing; Selling; Motivating</p>	<p>Work in places like business or legal setting or office; The preferred work environment encourages them to engage in activities, such as leadership, management and selling.</p>	<p>Values success in politics, leadership, or business; Influence; Leadership; Risk-Taking; Achievement; Initiative; high attainment; money, power and status</p>

Table 6. Vocational Profile Organizer

<h2 style="text-align: center;">Organizer</h2> <p style="text-align: center;">(Related to Hollingshead's «Conventional type» - C):</p>					
<p>Likes to work with numbers, records, or machines in a set, orderly way; generally avoids ambiguous, unstructured activities; is good at working with written records and numbers in a systematic, orderly way; values success in business; and sees self as orderly and good at following a set plan.</p>					
Typical Professions	Personality traits	Skills	Activities/Interests	Work environment	Values
Accountant; Administrative; Assistant; Budget Analyst; Business Manager; Credit Manager; Financial Analyst; Insurance Agent; Safety Inspector; Orderly; Precise; Detail-Oriented; Conservative Thorough	Being reliable, responsible, and dependable, and fulfilling obligations; being pleasant with others, cooperative attitude; Self Control, controlling negative emotions and avoiding it; Sees self as orderly, and good at following a set plan; well-organized; accurate; numerically inclined; methodical conscientious; efficient; conforming; practical; thrifty; systematic; structured; polite; obedient; persistent	Attention to Detail, being careful in completing work tasks; Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action; good at working with written records and numbers in a systematic, orderly way; work well within a system; do a lot of paper work in a short time; keep accurate records; use a computer terminal; write effective business letters	Involve following set procedures and routines; include working with data and details more than with ideas; . follow clearly defined procedures; use data processing equipment; work with numbers; type or take shorthand; be responsible for details; collect or organize things; Filing; Calculating; Processing; Systematizing; Following Procedures.	Independence to work on their own and make decisions, The preferred work environment fosters organizational competencies, such as record keeping and data management, in a structured operation.	Support and relationships to provide service to others in a friendly and non-competitive environment. Moral Values and Social Service. Responsibility and Autonomy. Values success in business; Structure; Order; Clarity; Precision; Attention to Detail

It's important to note that the use of G-Guidance questionnaire, in our proposal of career guidance, is different from the way most professionals use RIASEC questionnaire. Unlike many situations where professionals use RIASEC questionnaire to define career paths, G-Guidance questionnaire is designed to be used as a work base to start the process, right at the beginning of the intervention. Also, more than defining the vocational preferences of students, G-Guidance questionnaire guides their exploration efforts and provide feedback through the platform, by changing/developing as students perform activities.

### 2.3. Savickas' Life Design Theory

Life Design career guidance model was developed by a collective of researchers interested in examining the transnational validity of models and techniques, namely those in the field of career intervention. From this analysis it became obvious that 20th century models no longer responded to 21st century clients need for career guidance, especially because these clients live in knowledge societies, substantially different from societies for which classical models were designed.

This led to the idea of formulating an international career intervention model with the participation of researchers and practitioners from different countries and societies to avoid adaptation difficulties when transporting the model from one country to the next.

Early practices of career guidance in the 20th century promoted the idea of hierarchical dependence and stable relation-

ships in the work market. This meant that these practices advocated the notion that if workers were loyal and dedicated, they could aspire to a life-long job and the organization would respond with job stability and security (Savickas et al, 2009). This created the **concept of predetermined linear career paths that people would choose and follow along throughout their vocational development.**

The new relationship, or social contract, between employers and employees that was introduced in the 21st century, greatly influenced by globalization and information technologies, dictated that, **occupational prospects are far less definable, predictable, and linear, with plenty of difficult job transitions.** These changes require workers to change their perspective and attitude about their careers and develop skills and competences quite different from the ones that were required in the 20th century. This means that 21st century workers must see themselves as life-long learners who can use increasingly sophisticated technology, embrace flexibility rather than stability, work on their employability and create their own opportunities within the work market (Savickas et al, 2009).

This new paradigm implies that **career belongs to the individual and not the organization** (Duarte, 2004). In this context, there are several reasons why the core elements of 20<sup>th</sup> century career guidance models must be revised and reformulated to fit the modern, 21<sup>st</sup> century, postmodern economy (Savickas et al, 2009), namely:

- They are rooted in assumptions of stability of personal characteristics and secure jobs in bounded organizations.

- They conceptualize careers as a fixed sequence of stages. Concepts such as vocational identity, career planning, career development, and career stages each are used to predict people's adjustment to work environments assuming a relatively high stability of the environments and peoples' behavior.
- People's vocational interests seem to be less fixed than has been assumed in theories of vocational personalities such as Holland's.
- Their fundamental assumption of predictability based on stability and stages is debatable and, more importantly, may no longer be functional.
- Human behavior is not only a function of the person but also of the environment, thus no matter how stable individual characteristics might be, the environment is rapidly changing, forcing people to adapt and change also.

To respond to 21<sup>st</sup> century economy and work market characteristics, demands and dynamic, theoretical models are needed that emphasize human flexibility, adaptability, and life-long learning. Moreover, future methods of career counseling should take a dynamic approach that encourages individuals' imaginative thinking and the exploration of possible selves (Savickas et al, 2009).

Modern day individuals, independently of their age, life stage or developmental phase, are more aware of how peripheral variables might affect their lives and career path. This means that they have different concerns associated with vocational development and career construction. Issues like how to balance work–family activities and interactions is becoming

salient in people's reflections about their competencies, aspirations, and career related decisions. Managing interactions between different life domains has become a paramount concern for the many people whose employment is contingent, freelance, temporary, external, part-time, and casual (Savickas et al, 2009).

A major consequence of the interconnectedness between the different life domains is that we can no longer speak confidently of "career development" nor of "vocational guidance." Rather, we should envision "life trajectories" in which individuals progressively design and build their own lives, including their work careers (Savickas et al, 2009). When people design their life trajectories, variables like ideals of self-realization, social justice, equality of respect, or care for certain others, might be the most valued ingredients of the narrative they construct when projecting the future, sometimes more so than traditional career related variables like skills or vocational preferences.

***Savickas's Life Design model inverts the traditional logic of career guidance from a perspective of changing one's life to fit a career path, to a perspective of designing a career path to fit one's life.***

Although we know that at the beginning of the last century, these considerations were probably present in the reflections of young people pondering their occupational choices and undergoing career guidance processes, they were not seen as the main criteria for career decision making. Yet in our current society, ethical considerations are of a much higher psychological priority. This is greatly since society and culture nowadays entices individuals to reflect on what matters most

to them (and makes them happy), and to a greater awareness of new risks associated with our current way of life.

The new relationship between the worker and the work world creates the need to develop and apply new systems of personal promotion. Specifically, vocational interventions should assist individuals to reflect about their main characteristics (vocational strong points) as being relative to the context in which they live and not universal. The objective of such reflection is to resolve problems, namely of relevance and adjustment, that may arise as individuals build their lives, by matching their needs to those of the contexts, in particular the context of work activities.

In terms of career guidance, we must now go beyond, building upon the concepts of matching and development (Guichard, 2005, as cited in Savickas et al. 2009). This means basing career guidance structure around answering key questions:

**What are the factors and processes of a person's self-construction?**

While it remains important to understand how people choose occupations and how careers develop over time, we should formulate a better understanding of how individuals construct their lives through their work.

**How may individuals best design their own lives in the human society in which they live?** This question emphasizes the need to concentrate on activities in different life domains than just work. By engaging in activities in diverse roles, individuals identify those activities that resonate with their core self. Through activity, along with verbal discourse about these experiences, people construct

themselves.

This means that the most efficient way to help students in building their careers, from pre-school to university and beyond, is to promote the awareness and use of processes and tools that will allow them to make choices that express their self-concepts. Habits of *reflection on the self and the environment, receptivity to feedback, and the imagination of possible selves* (Savickas et al, 2009), are excellent examples of key processes that are at the base of consistent career choices.

So, to have career guidance based on the Life Design Model means that psychologists should be aware that an individual's (vocational) identity and knowledge are a product of social interaction, from which meaning is co-constructed through discourse. And if this is the case, Psychologists must take notice that all the experiences of social interaction in a student's past and present are contributing to their idea of "what they want to do when they grow up". And by social interaction, we mean teachers, parents, peers, siblings, coaches and mentors, among other significant others. Due to the multitude and complexity of factor that might contribute to student's vocational identity and career choices, it's more efficient for Psychologists to help them cope with them.

Thus, the new paradigm for career counselling must equip students with specific knowledge and skills to analyse and *cope with ecological contexts* (for example opinions from significant others about the best career path), *complex dynamics* (for example, unstable job market with professions disappearing and being created at a fast pace), *non-linear causalities* (meaning that our aptitudes and interests for

a specific vocational area in the present doesn't mean that it's going to turn into a good fit in the future), **multiple subjective realities** (not all students aspire to a "traditional" life path type like studying-working-family nowadays), and **dynamical modelling** (efficient career counselling has to be adapted individually and any reduction to a standardized treatment diminishes its substance) (Savickas et al, 2009).

G-.GUIDANCE project's team aimed to design a career guidance process that would integrate Life Design theory main features, in the most simple, practical and accessible way, trying to translate complex dynamics into meaningful career guidance activities, that could be implemented in school context. This meant designing materials, tools, content and activities that would:

- connect students with realistic sources of information, close to the reality of professionals and workplaces;
- promote interaction with relevant educational agents that could provide feedback about career related issues and information;
- provide opportunities for self-exploration as well as for projecting their vocational self on career paths.

For instance, many career exploration activities proposed on G-Guidance platform imply that students must venture outside school and interact with people in their community, to be able to complete their tasks. By asking them, for example, to interview a professional from a certain profession they like (e.g. lawyer), and make a video presenting that interview, will promote the development of a diversity of skills besides all the valuable and realistic

career information that they will get from interacting with a real-life lawyer. Even (or maybe more importantly) the barriers and difficulties that they will find to complete their tasks outside school will motivate them to be more autonomous, to solve problems, to find alternatives, to be creative, to do networking, among other skills that are a big part of having career adaptability, which we know from research is essential for career success in later life.

Obviously, it's fundamental that, and considering a variable level of vocational (and general) immaturity, school psychologists above all, but also teachers and parental figures, assume their roles as motivators, enablers and facilitators of students' career exploration endeavours. Which means that a career guidance methodology based on Life Design depends on everybody, not only students, to act, be proactive and engaged in career guidance.

### 2.3.1. Life Design's Approach and Career Guidance

Taking in account the social cognitive roots of the Life Design model, any career guidance process should consider and respect two essential aspects:

- An individual's knowledge and identity are the product of social and cognitive processes taking place in context of interactions between people and groups as well as negotiation between them (Gasper, 1999). Which means that any career guidance process must include as much as possible an account of the individual's background, namely family background, as possible, including significant others that might have had an influence on his/her vocational development. This includes contexts like

after school activities that a student might have participated, and the social interactions undertaken while participating on those activities. These experiences and information are valuable parts of building a career. In this sense, G-Guidance Project suggest a few activities related to the exploration of students' self-awareness. For example, "Who am I?" activity that aims to promote students' reflection about how they see themselves and how they think that others see them. Also, for this activity to be complete, students must identify their qualities and things that they are good at, but also personal areas that they need to invest and improve.

- The meaning an individual gives to reality is co-constructed in a social, historical and cultural context through the discourse with which we form our relationships (Young & Collin, 2004). This means that while doing career guidance, we must frame any student's beliefs, values, decisions, and perspective about his or her career within their reality and adjusted to the needs and demands of their time, and avoid pre-determined, static and outdated career paths, that might easily frustrate them going forward. Careers should be designed accordingly with every student's needs, characteristics, and social, economic and cultural reality. Considering this dimension, G-Guidance Project created three specific activities that tries to access students' expectations about their future career, namely "Future Me!", concerning how they envision their lives to be in the future. Also, "My professional values", pertaining what they value most

on a (future) profession. And finally, "My personal interests" to connect their personal interests, not necessarily academic, to a career path. Any kind of activities, whether the ones that G-Guidance suggests or others that school psychologists might add in the future, for expansion and adjustment purposes, that will allow students to explore their individual, social and cultural identities, in relation to their career building, are essential to support consistent and effective career decisions.

Additionally, and based on the premise that career guidance intervention should promote students' thinking about their future possible selves, our project developed several activities, for more than 50 professions, to allow students to explore their career options. Moreover, and recognizing that career guidance is impacted by social feedback, G-Guidance created an activity named "Interviewers for a day", where students can contact real professionals and pose their own questions and receive feedback directly from real professionals, with first-hand knowledge about the reality of their professions.

When adopting a Life Design approach to career guidance, psychologists should have in mind that this perspective implies that career guidance is structured to be life-long, holistic, contextual and preventive. This means that, despite the techniques and materials that any psychologist might choose to use, the framework of career guidance should respect these fundamental aspects, that help to guide intervention towards promoting career self-sufficiency in students.

### 3. Developmental Aspects of Career Guidance



Developmental research indicates that significant normative changes take place during the adolescence period from 13 to 17 years old. This development has a central impact on multiple individual and social domains that operate interactively to facilitate or impede effective psychological functioning. Considering that the G-Guidance Project is implemented with adolescents aged between 13 and 17 years old, it is essential to understand how vocational development can be impacted by the developmental changes.

Briefly, adolescence is a time in which individuals undergo significant changes and increased stressors at school and at home. However, the timing and transitions vary both within and between individuals, and these changes are not always linear or smooth. Changes that occur in adolescence include physical maturation, brain, cognitive and intellectual progress, social, emotional and personality development (Lerner & Steinberg, 2009; Marshall & Neuman, 2011; Steinberg & Morris, 2001). With this in mind, G-Guidance platform was developed considering cognitive and intellectual skills that are expected to emerge during adolescence. Also, our platform includes functions that allows students to interact with each other, and activities aiming to promote their social and emotional development and their knowledge about themselves, besides all the career related information. In summary, an effort was done to adjust career guidance activities, materials, tools and content, to current day 13 to 17 years old students, not only in terms of physical and psychological development, but also in terms of their patterns and favorite means of communication, and very important, their preferences. Next, we'll present some of the dimensions that were

considered important to attend while designing and planning our career guidance intervention.

### 3.1. Physical maturation

During this stage of development an important physical maturation takes place that have been grouped under the general category of puberty. Puberty is a universal, complex, and profound biological and social transition that emerges during pre-adolescence. It begins with some changes in brain-neuroendocrine processes, hormone concentrations, and physical morphological characteristics and culminates in reproductive and sexual maturity. The timing and social significance of these changes vary across historical time and cultures. The significance of timing of puberty and it affects the dynamic interactive processes such as physical growth changes, emotions, problem behaviour, cognition, and sexual activity.

Regarding the physical development, in this period, occurs fast changes that sometimes aren't recognize by adolescents. However, it's essential for youths to perceive their physical transformations. Physical characteristics such as motor skills and/or muscle strength could be essential in some professions, like on the case of professional athletes. So, it's important for adolescents to develop their awareness about their own body and physical characteristics. In order to promote this, G-Guidance follows Savickas' approach and developed activities with the goal of promoting students' self-exploration and self-awareness (Savickas & Porfeli, 2012). Being aware of the boundaries of our physicality, in terms of aspects like strength, coordination, endurance, among others is essential for a consistent and

realistic decision-making, concerning career paths. Some career paths are very demanding in this regard, considering the nature of the profession, such as fireman, military or professional athletes.

### 3.2. Brain, cognitive and intellectual changes

A great brain development on the prefrontal cortex and cortico-cortical interconnectivity also emerges during adolescence, reflecting an increase on the neocortical volume, the gyrification of the prefrontal cortex, and the cerebral white matter. All these physical cerebral development (i.e., neural and neuroendocrine-endocrine systems) are susceptible to changes that arise from interactions with the environment. It seems to be on the base of adolescent cognitive development and its integrative functions.

In terms of Inhelder and Piaget's cognitive development, for adolescence, the key transition is from concrete to formal operations. Specifically, the shift from a class-based logic system to a formal propositional logic system, moving from inductive reasoning – working with specific observations to a hypothesis, to deductive reasoning – working from a hypothesis to generate logically and testable inferences. According to Neo-Piagetian models (see Pascual-Leone) two important improvements occur in the capacity of adolescents' cognitive development:

1. the expansion of available working memory and the ability to manipulate increasing numbers of dimensions within working memory. These significant transformations in children's reasoning abilities provide the capac-

ity for abstract, formal, self-reflective and recursive reasoning or thinking.

2. youths begin to think about others in terms of their personality characteristics and traits, as well as concrete behaviors, and they increasingly evaluate themselves in comparison with their peers rather than in comparison to absolute standards. Adolescents become more comfortable with diversity and social relativity and can move beyond the more rigid rule-based or conventional expectations, considering social standards that may vary depending upon the circumstances and individuals.

Summing up, during adolescence occurs a significant the prefrontal cortex development, which is responsible for the improvement of planning skills, establishment of goals, self-management, memory, attention and others metacognition functions. In this sense, for the career guidance process, adolescents will be more capable of doing hypothetic analyses about their career options. Also, as their memory and attention are improved, they can understand and retain more information, what is important to a process that involves so much exploration to frame a vocational profile.

However, career guidance process is much more than a simple exploration of professions characteristics. During their academic path, students will be confronted with several choices, for example about the course they should pursuit or the subjects they have to choose. For them to make this choice in an informed and conscious way, the G-Guidance project proposes to explore the Professions Guide, which includes various information

about various professions (e.g., possible academic paths, main activities, working hours, average salary, etc.). In addition, our project also proposes carrying out vocational exploration activities, such as the “Vocational Detective” activity.

### 3.3. Social changes

As children move into adolescence, peer relations become more multifaceted and complicated. They form close friendships to avoid rejection as well as to maintain group acceptance and provide companionship and emotional support. By adolescence, the peer context becomes more complicated. Relationships with romantic partners become increasingly important. Also, interactions occur in mixed-gender groups and the peer group become a key component of many adolescents’ social networks. Moreover, adolescence activities become quite diverse and organized, including interest and hobby clubs or music groups, among others. Additionally, adolescents tend to move away from their emotional dependence upon their parents and toward autonomous functioning as adults. The peer context becomes much important and adult monitoring is reduced.

So, in career guidance process, peers play a pivotal role in adolescents, since they tend to value peer opinion more and behave in accordance with what they think is socially accepted. Thus, we often observe similar interests and choices within the same group of friends. Considering the importance of peers in this developmental phase, the G-Guidance project will be developed in the context of the class, so that students can help each other in the vocational guidance process.

In addition, adolescents face one broad challenge during the transition from childhood to adult life: the entrance into production field of the culture and society. New roles and responsibilities emerge. Following the social, parents, teachers, and peers’ expectations, adolescents must be able to make his/her living in the society and economic system. For that, they need to become economically independent people, they must move from being a member of the parents’ family and must be a full member of society. This developmental challenge consists typically in a complex set of decisions concerning schooling, education, and career that are defined by: (a) family and social expectations; (b) social and institutional sources (i.e., school curriculums, coaches, and classmates); (c) and a variety of opportunities created by educational systems and the economy. All these kinds of environments differ along many factors, such as gender, social stratum, ethnic background, and family characteristics. Childhood experiences and biological characteristics are transformed into interests, competencies, and self-beliefs and begin to play an increasingly important role as the adolescent starts to make his/her way toward future career and adult life.

Regarding the expectations, career guidance process involves the ability of managing expectations (oneself and others). So, this process is impacted not only by the expectations that adolescents have about the professional world, but also by the expectations that the people around them have for them. For example, someone whose family has a great number of doctors, might feel the pressure of the expectation for him/her to become a doctor as well, which might not be the ex-

pectation of the adolescent. Thus, it's important to help the adolescent to manage family expectations about their career path, especially when they don't converge with his/her own. To involve the family in the career guidance process, the G-Guidance project proposes the creation of communication channels between schools and the families, such as, for example, a project's private profile on social networks, in which activities developed by the students can be shared and followed by the family. This will create a good and direct feedback between students and families about the development of career guidance, allowing for all people involved, including the school psychologist, to offer their opinion and discuss career path possibilities, and eventually negotiate expectations.

### 3.4. Emotional changes

During adolescence, individuals improve their capacity to differentiate between subjective emotional responses and objective eliciting situations. They can also differentiate one's own emotions from those of others, to comprehend those conflicting emotions can occur simultaneously, and to discriminate among complex emotions. They have a better ability to recognize and understand one's own feelings, as well as the feelings of others.

The new cognitive and physiological changes may be, at least partly, responsible for these changes in the adolescents' emotional experience. Adolescence is a period of rapid fluctuations in mood, with emotional reactivity becoming more frequent and more intense. Adolescents also develop new skills to regulate and modulate intense emotions in a more effective

and flexible way. Some strategies that they use are, for example:

- cognitive reappraisal and active engagement;
- learning to self-soothe and attend to emotions;
- understanding emotional expression, separating momentary emotional experiences and distinguishing feelings from facts;
- maintaining interpersonal relationships.

Additionally, adolescents are more prepared to express and communicate emotions successfully. Moreover, they tend to have the social and self-awareness to know when to apply each emotion regulation strategies. In summary, adolescents generally increase their sophistication and frequency of usage of positive emotion regulation strategies over the course of adolescence. Taking into account gender differences, women in general express their emotions more openly, regardless of the type of emotion (positive or negative) and tend to express more internalizing symptoms (for example, sadness, anxiety, sympathy) than men. However, there is a substantial variation across individuals in emotional experience that reflects individual differences in developing capacities to recognize and regulate emotions (Coe-Odessa, Narr, & Allen, 2019).

Applying the emotional development that occurs during adolescence on career guidance process, the improved ability of managing emotions is essential in pivotal moments, like transitions, moments of change and moments when their vocational plans are put to the test, such as

when they fail to obtain the minimum entry grade to a course.

### 3.5. Personality and moral development

Adolescents make important changes toward an adult-like personality. Adolescence is a time when the self-system is re-defined and marks the gradual emergence of another layer of the self-identity. They begin to search for sameness and continuity of the self that provides meaning to life. According to Erikson (1950) identity formation is thought to be the key developmental task of adolescence. Erikson described identity formation as a process in which adolescents move between a sense of identity (i.e., commitment) and role confusion (i.e., reconsideration). Especially, adolescence is viewed as a time of self-exploration.

Adolescents begin to develop more abstract characterizations of themselves, and self-concepts become more differentiated and better organized. They evaluate themselves both globally and along several distinct dimensions (e.g., academics, moral conduct, sports, appearance and social relations). In general, global self-esteem is stable during adolescence and increases slightly over the period. However, the levels of self-esteem are related to different variables (e.g., parental support, peer relations, psychological adjustment, etc). In this stage, it's possible to see an increase of the identification with adult social roles and the social investment. Youths construct conceptualizations about themselves and tell stories to their parents and peers aimed at building up a coherent personal identity.

Applying these facts on career guidance process, on adolescence individuals are more capable to identify their qualities, strengths, skills, weaknesses, difficulties, interests and activities that they like or dislike to do/practice. All this information can be used on this process, since it's essential to map students' vocational profile. To do that, this project have created and implemented the G-Guidance Questionnaire.

Continuing to explore the adolescence, this stage is also a period of growth for moral and prosocial dispositions, cognitions, and behaviors (Hart & Carlo, 2005). Moral reasoning (judgment) continues to mature during adolescence reflecting advances about hypothetical or real-life moral dilemmas, and its subsequent moral decisions. Adolescents have improvements in the abilities to infer the perspective of others, to understand the self, and to solve social problems.

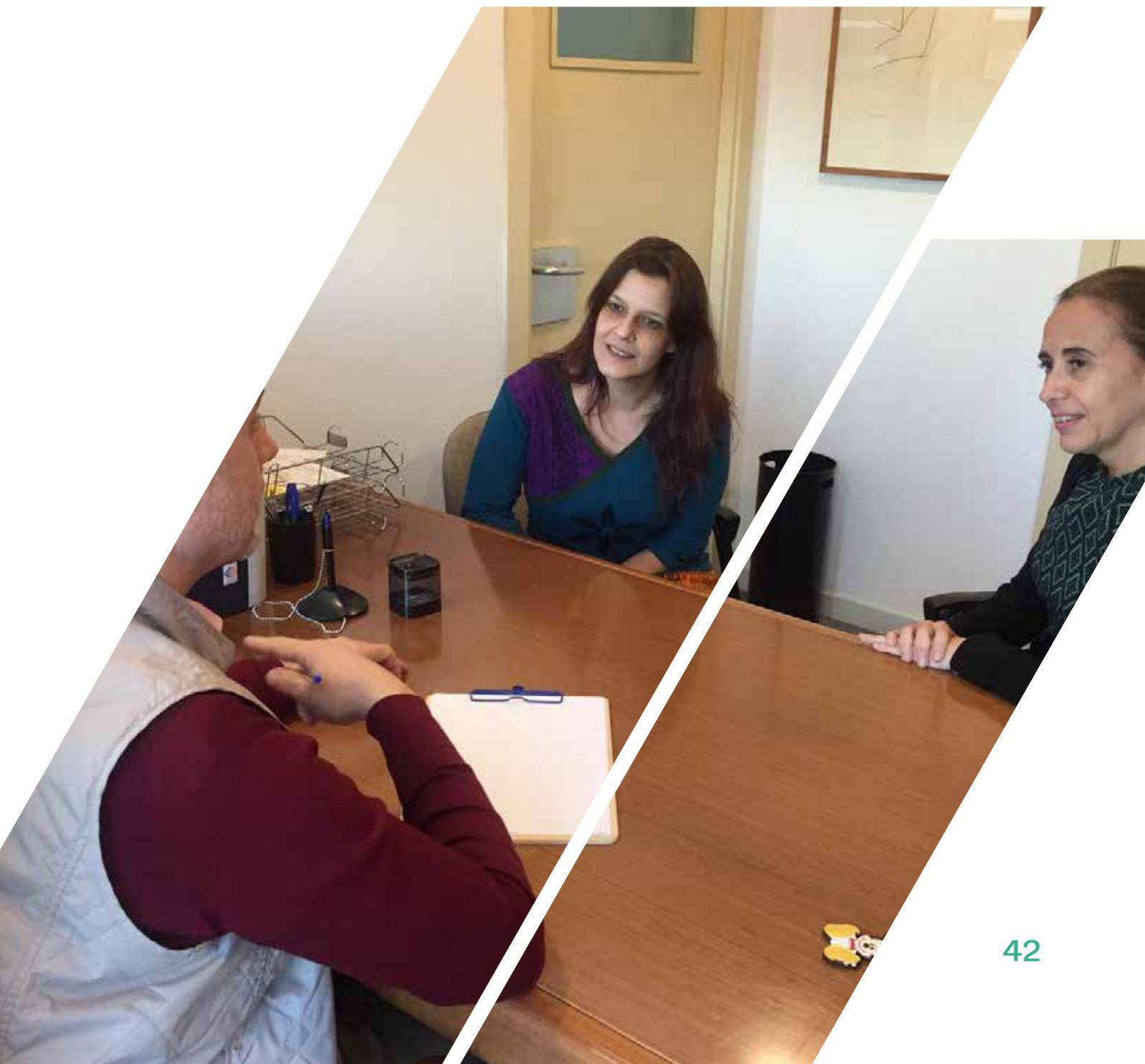
In terms of Piaget, adolescents go from the "heteronomous stage" - based on laws created and enforced by authority which reasoning for the acceptance of rules is directly linked to the punishment; to the "autonomous stage" - appreciate the perspectives of others and their moral reasoning is expanded beyond exact reciprocity and considers the interests of the other person.

According to Kohlberg, the adolescents' moral development goes from the "pre-conventional" - rules are based on the obedience, punishment, individual interests and authority; to "post conventional stage" - rules and principles are based on an autonomous moral conception, refers to a universal set of principles such as justice and fairness.

As such, developmental changes require attention with adolescents. It affects the normative nature of various psychological functioning, and the complexity of the social context and demands. One clear implication of this issue is that the aspects of career guidance targeted for assessment and intervention must be adjusted developmentally. The developmental process in addition to the role transitions and institutional tracks define the space that channels young people's future career. In light of these developmental characteristics, the environmental changes associated with transition to junior high school should emphasize a mastery-goal orientation, close relations between students and teachers, self-focus and self-assessment rather than social comparison, competition, performance-goal orientation or distant adult relationships, to increase decision making and positive motivational outcomes. In summary, these changes require developmental adjustments to both the content and process of career guidance. This development is channelled by a variety of opportunities and constraints in the adolescent's social and institutional environment.

According to Havighurst (1948), typical developmental tasks (i.e., a task which arises at or about a certain period of time in the life of an individual, successful achievement of which leads to his happiness and success with later tasks motivated by normative demands, physical maturation, and personal values and aspirations) for adolescence include achieving mature relationships with peers and forming a sex-role identity, preparing for marriage (or other romantic relations)

and family life, achieving emotional independence from parents, and preparing for an economic career, including planning education.



## 4. Career Guidance and Counselling



Career guidance and counselling are very important to preparing young people to integrate successfully into the labour market and achieve satisfactory career realization. Career guidance and counselling is an active and long process, which has a purpose to help youths to make career choices and to take educational, learning and vocational decisions. During individual or group counselling sessions, indoor and outdoor activities, individual or group tasks, career guidance provides adolescents the opportunity to acquire self-knowledge, awareness of the world of professions and operational skills that will help them find personal fulfilment. In making a career choice, students must have a clear understanding about themselves, career knowledge, and the relationship between both aspects.

Moreover, career guidance process and counselling encourage youths to explore their traits, skills, interests, achievements and looking for future work opportunities that might also suit the values they hold as important. Career knowledge is defined as the ability of individuals to obtain information on job descriptions and duties, working conditions and environment, advantages and disadvantages, opportunities and prospects in different work situations (Ashari, Azman, & Rasul, 2019). Providing boys and girls with information about potential jobs that suit a range of interests, aspirations and skills may help them identify possible future careers. This information based on various sources could challenge gender stereotypes in career development and could equip adolescents with realistic options, allowing them to make intelligent and informed career decisions. The third objective of career guidance is to stimulate the development

of key competences such as skills for planning, problem solving, decision making, job searching and applying, important for the real working life.

Career guidance is like a journey that provides an opportunity for exploration, self-reflection and self-assessment to discover a new knowledge and information that reveal youths' potential. In an educational context, this process is directed by school psychologists, but in it could also participate career counsellors, parents, teachers, representatives of different career fields and employers. Career guidance process aims to provide support for students in their career and study path choices while taking into account youths' life situation, personal traits and skills, needs of labour market and opportunities of the education system. Advice, information, support and resources given within the process of career guidance and counselling may be especially valuable for the development of adolescents' career identity by the mechanisms of career adaptability and career maturity. Encouraging students to become concerned about their vocational life, take control of efforts to be prepare for career future, display curiosity by exploring possible selves and different scenarios, and feel confident to pursue their aspirations (Savickas & Porfeli, 2012) is especially important given that they will be planning for jobs within a labour market that is more insecure, unstable and changing. From this point of view, career guidance at school is an even more necessary and challenging process, that will not only help youths achieve career goals and increase their employability, but it is considered across the EU state members as a focal point for preventing the widespread problem of

early school leaving, poor qualifications and disadvantage, which will have an impact on societal and economic problems (productivity, criminality, employment, health, social exclusion, etc.) across all the European state members.

#### 4.1. G-Guidance Project's Approach to Career Guidance

G-Guidance career guidance method will be based on a complex model, combining elements of structural theories, such as Holland's theory, Savickas' (2015) Life Design constructivist approach and systemic and ecological approach (Bronfenbrenner, 1979; Bronfenbrenner, 2005). A Career guidance methodology moves from scores to developmental tasks to stories. Thus, this integrated approach will allow the development of wide variety of tools as questionnaires, checklists, self-descriptions, role games, different indoor and outdoor (project-based learning or PBL) career guidance activities for adolescents to perform through the academic year. All these activities will be presented in the platform, with gaming elements. Based on all these different instruments for career guidance, the platform will stimulate independent search and analysis of information (skills for working with information resources and channels); self-diagnosis, self-analysis and self-assessment; self-support and specific skills development activities. The platform will also analyse each student's preferences, interests, skills, qualities, abilities, values and achievements. Data will be collected in form of scores, professional types, stories, projects-based results and products will be stored in a student portfolio. This portfolio allows youths to create and be

aware of their own professional profile.

The career guidance methodology used on G-Guidance Project will address five important dimensions of career guidance process, that named our five modules:

- a) Self-Awareness;
- b) Vocational Profile;
- c) Career Exploration;
- d) Project Building and Decision Making;
- e) Career Maturity and Adaptability.

From this point of view, the platform is an interactive tool to work on the above-mentioned dimensions/modules. The design of these distinct modules, their sequence, objectives, content, tasks and activities within each of them, reflect the main ideas of Career construction theory, related to developmental tasks of Career Exploration stage (crystallization of vocational preferences, specification of occupational choice, actualization), development of vocational Self-concept, career maturity and adaptability. On table below (see table 7), it's possible to access all detail information about each module, according to Savickas developmental tasks.

Table 7. Career Guidance Sessions Structure

Developmental tasks	Dimensions	Main goals	Main questions	Activities
<b>Crystallization</b>	Self-Awareness	<ul style="list-style-type: none"> <li>- Promote students' knowledge about who they really are.</li> <li>- Explore students' personal characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>- Who am I?</li> <li>- What are my strengths?</li> <li>- What are my skills?</li> <li>- What are my difficulties?</li> <li>- How can I develop them and turn them into benefits?</li> <li>- What do I like to do?</li> <li>- What are my hobbies?</li> </ul>	<ul style="list-style-type: none"> <li>- Who am I?</li> <li>- Future me</li> <li>- My personal interests</li> </ul>
	Vocational Profile	<ul style="list-style-type: none"> <li>- Promote students' professional self-determination.</li> <li>- Explore student's professional values, interests and priorities.</li> </ul>	<ul style="list-style-type: none"> <li>- What are the most important things for me about certain profession?</li> <li>- What are the most important and urgent things for me right now?</li> <li>- What do I value most on a career?</li> </ul>	<ul style="list-style-type: none"> <li>- G-Guidance questionnaire</li> <li>- Vocational profile video</li> <li>- My professional values</li> </ul>
<b>Specification</b>	Career Exploration	<ul style="list-style-type: none"> <li>- Promote students' exploration of professions world.</li> <li>- Facilitate students' understanding about the intersection between their Self and professions world.</li> <li>- Getting students acquainted with many possible career paths.</li> <li>- Promote students' knowledge about some profession's routines.</li> </ul>	<ul style="list-style-type: none"> <li>- Do I know the professions well enough?</li> <li>- Am I aware of their advantages and disadvantages?</li> <li>- Will I be able to express myself in my favourite profession?</li> </ul>	<ul style="list-style-type: none"> <li>- Professions Guide exploration</li> <li>- Myths &amp; Truths</li> <li>- Interviewers for a day</li> <li>- Exploring vocational environments</li> <li>- Family tree of professions</li> </ul>
	Project Building and Decision Making	<ul style="list-style-type: none"> <li>- Promote students' self-realization.</li> <li>- Promote students' decision-making skills.</li> <li>- Promote students' strategic thinking.</li> </ul>		<ul style="list-style-type: none"> <li>- My TOP 5 professions</li> <li>- Professions' Network</li> </ul>

Table 7 (cont). Career Guidance Sessions Structure

Developmental tasks	Dimensions	Main goals	Main questions	Activities
<b>Crystallization</b>	Self-Awareness	<ul style="list-style-type: none"> <li>- Promote students' knowledge about who they really are.</li> <li>- Explore students' personal characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>- Who am I?</li> <li>- What are my strengths?</li> <li>- What are my skills?</li> <li>- What are my difficulties?</li> <li>- How can I develop them and turn them into benefits?</li> <li>- What do I like to do?</li> <li>- What are my hobbies?</li> </ul>	<ul style="list-style-type: none"> <li>- Who am I?</li> <li>- Future me</li> <li>- My personal interests</li> </ul>
	Vocational Profile	<ul style="list-style-type: none"> <li>- Promote students' professional self-determination.</li> <li>- Explore student's professional values, interests and priorities.</li> </ul>	<ul style="list-style-type: none"> <li>- What are the most important things for me about certain profession?</li> <li>- What are the most important and urgent things for me right now?</li> <li>- What do I value most on a career?</li> </ul>	<ul style="list-style-type: none"> <li>- G-Guidance questionnaire</li> <li>- Vocational profile video</li> <li>- My professional values</li> </ul>
<b>Specification</b>	Career Exploration	<ul style="list-style-type: none"> <li>- Promote students' exploration of professions world.</li> <li>- Facilitate students' understanding about the intersection between their Self and professions world.</li> <li>- Getting students acquainted with many possible career paths.</li> <li>- Promote students' knowledge about some profession's routines.</li> </ul>	<ul style="list-style-type: none"> <li>- Do I know the professions well enough?</li> <li>- Am I aware of their advantages and disadvantages?</li> <li>- Will I be able to express myself in my favourite profession?</li> </ul>	<ul style="list-style-type: none"> <li>- Professions Guide exploration</li> <li>- Myths &amp; Truths</li> <li>- Interviewers for a day</li> <li>- Exploring vocational environments</li> <li>- Family tree of professions</li> </ul>
	Project Building and Decision Making	<ul style="list-style-type: none"> <li>- Promote students' self-realization.</li> <li>- Promote students' decision-making skills.</li> <li>- Promote students' strategic thinking.</li> <li>- Promote students' career planning skills.</li> </ul>	<p>Which profession suits better to my life? Can I take the most effective and rational decisions depending on the situation? Can I set a realistic and promising professional goal? How do I plan my future professional career?</p>	<ul style="list-style-type: none"> <li>- My TOP 5 professions</li> <li>- Professions' Network</li> </ul>
<b>Actualization</b>	Career Maturity and Adaptability	<ul style="list-style-type: none"> <li>- Help students to create their career path.</li> </ul>	<ul style="list-style-type: none"> <li>- What is important for me that I discovered during the journey in the platform?</li> <li>- What can I do well?</li> <li>- What do I have to work on and how will I achieve it</li> </ul>	<ul style="list-style-type: none"> <li>- Vocational detective</li> <li>- Career moodboard</li> </ul>



## 4.2. G-Guidance Career Guidance: Intervention Design and Brief Description

G-Guidance career guidance session plan includes a total of 12 sessions, distributed across the school year, accordingly with the schools' internal organization and national school year schedule. For G-Guidance project, as there was a timeline to comply, there was a need to establish a common schedule for the sessions to be implemented, among the international partners of the project, mainly for reasons associated with the assessment process at the end of the project's timeline. Our recommendation for future implementations of G-Guidance career guidance is to adjust, as much as possible, the implementation to last throughout the school year, respecting the workload of both students and professionals (e.g., school psychologist and teachers), as well as the periods when there's an overlap and/or overload of school and academic activities, such as Christmas or the end of school year (e.g., exams period). Ideally, schools should plan and include the career guidance activities as a part of the yearly plan of activities, with their own schedule and location, to underline the importance of the intervention for the whole school community, especially for teachers, students and their families. Also, the workload implied in some of the planned career guidance activities are more easily managed, so not to overload students, if they are well distributed in time and spaced, thus lowering the chances of students disengaging from the process. Setting the appropriate mindset of significance, validation and importance, for career guidance intervention is essential for its success. This mindset can make the difference in terms of the

engagement, motivation and investment of students, as well as for the support, engagement and validation from parents and teachers.

The number of sessions defined for our career guidance process was decided after an extensive analysis of good practices of career guidance, both by consulting relevant literature on this field and by discussing this matter with experienced psychologists, that have implemented career guidance in school context for several years. The number of sessions was defined to be able to include all the relevant aspects of career guidance defined in our theoretical framework (e.g., Life Design Model), as well as extending career guidance throughout the school year, as research shows that school-based interventions should have a least one full (school) year to increase their effectiveness (Mertens, Dekovic, Leijten, Van Londen, Reitz, 2020). At the same time, the number of sessions defined was considered to be the ideal number, to include all the important career guidance activities, without overloading students and decreasing motivation and engagement.

Career guidance intervention should be fully implemented and coordinated by the school psychologist, preferably assisted by, at least, one teacher, for purpose of support, and to comply with G-Guidance's career guidance methodology, which underlines the importance of the role that teachers play on students' career guidance. The aspect of forming a cohesive team, that includes representatives from the school board or directing body is very important, to be able to organize all aspects necessary for the implementation of the intervention, namely in terms of

providing adequate workplaces, schedules and resources. Also, having every relevant agent from the school context involved on career guidance will also validate and reinforce its importance and promote engagement.

Every session planned on the career guidance structure will have, at least, one activity that implies that students interact with G-GUIDANCE platform, as the platform is an important part of our project's innovative approach to career guidance, as an important tool to promote students' motivation and engagement, as well as more and better communication between school psychologists and the students. Only the first and last sessions do not imply a direct action of the students in the platform, although the platform is addressed, especially on the first session, when it is introduced and explained to the students.

Each career guidance session has a maximum duration of 1.30h, taking in consideration that the time of student active engagement should be around 1h, with 30 minutes to compensate possible delays on the session development. The length of the sessions was decided after consulting a group of experienced school psychologists that agreed to cooperate with G-GUIDANCE project and discussed among the psychologists and researchers that integrated the project's team. The proposed length for the sessions should be seen as a reference value that other professionals should adjust and adapt for each intervention context, accordingly with its characteristics.

Our career guidance sessions have different objectives, taking in consideration Savicka's model of career construction,

which can be SELF-AWARENESS ACTIVITIES, in the case of activities that have as a main goal to help students know themselves better and thus being more prepared to make adequate career choices, which are the ones that best fit my real characteristics. There are also INTERPERSONAL ACTIVITIES, which aim to receive feedback, relevant information and validation from other people about myself, my characteristics and what I can best direct them vocationally. CAREER EXPLORATION ACTIVITIES are designed to increase student's knowledge about professional paths, including, courses, professions, professional contexts, among other useful vocational information. The career guidance process also includes PROJECT BUILDING ACTIVITIES, which aim to prepare students to connect personal features and career paths, as well as be aware of the obstacles to overcome, skills to develop and resources to use.

Career guidance activities also have different types, which is to say, they are executed in different formats, that demand different kinds of skills from students to accomplish them, providing different stimulus, which makes career guidance more interesting, dynamic and engaging. We have PLATFORM ACTIVITIES, which allows for students to receive feedback and rewards for their work on the activities, as well as giving easy access to relevant career information and what their classmates are doing in the same way. Platform activities also gives the psychologist all the information about the student's work and information to use on future career guidance sessions and an easy way to motivate, validate and answer questions from the students concerning career guidance. MULTIMEDIA ACTIVITIES, are the ones that

will prompt students to use their favorite way of communicating, interact and learn (obtain information), making career guidance activities more interesting and updated for them. In the case of EXTENSION ACTIVITIES, these activities have two important objectives, one of them being engaging parents to participate on their kids' career guidance, and the other to take career guidance outside school and into the community or, in other words, real life. This means that extension activities will ask students to get a more realistic view about careers, professions and vocational paths, with the help, supervision and participation of their parents.

Table 8 presents the general organization of the 12 sessions planned for G-Guidance career guidance process, with a short description of the activities planned for each session. A reference to the objective and type of activity is provided for a better perspective and understanding of the proposed workplan. As before, it's important to note, for future implementations of this career guidance process, that these sessions and activities constitute a reference framework that allows (and recommends) that school psychologists adjust and adapt to fit the characteristics and needs of the specific group of students and school contexts where it's going to be implemented. For a more detailed description of the sessions, tools, materials and implementation instructions, please see G-GUIDANCE's "Training and Users Manual" which has all the technical information needed to get an in-depth perspective and learn how to implement the career guidance process using the tools and content created by our project.

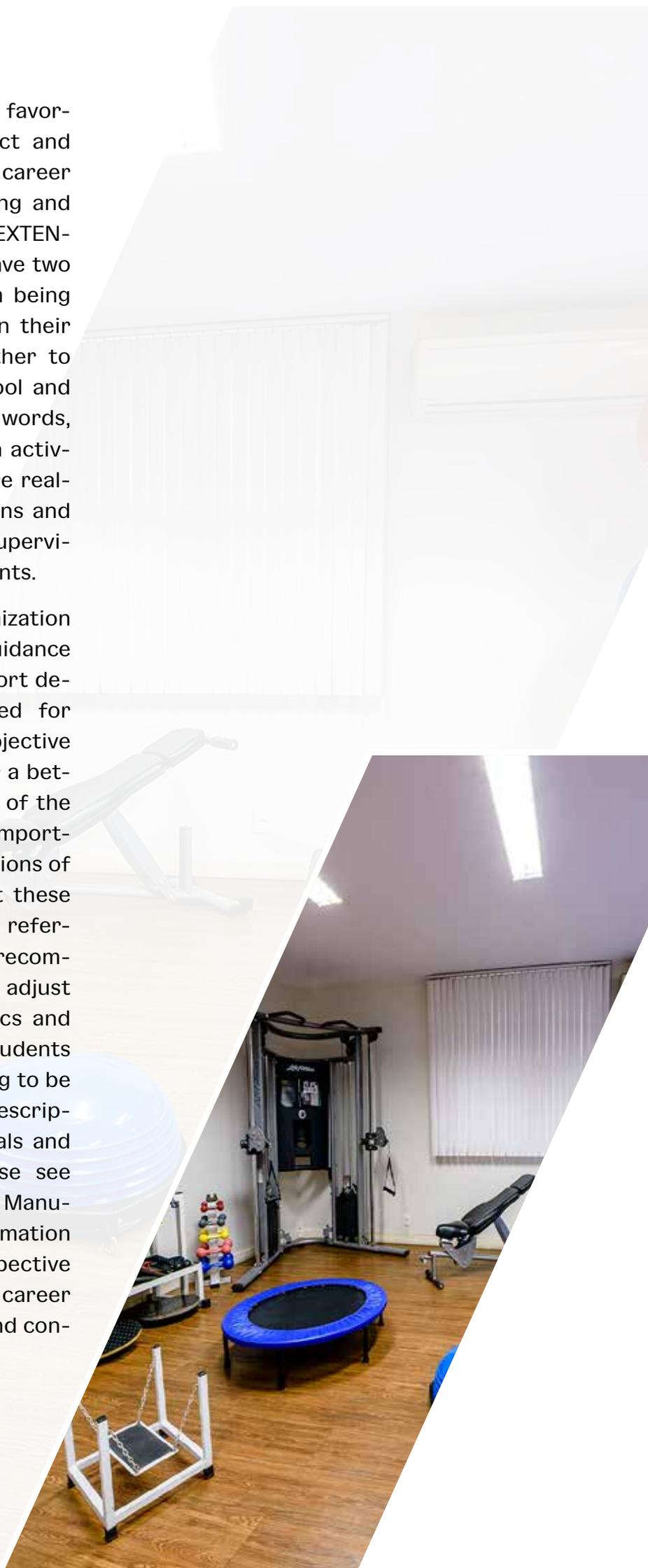


Table 8. Career Guidance Sessions - Short Description

Session	Short Activity Description
1	<p>Introducing the career guidance project to students</p> <p>Presentation and discussion of rules and expectations for career guidance</p> <p>Presentation of G-Guidance Platform (without interaction)</p> <p>Signing the informed consents (for students)</p> <p>Create class account of Instagram, Facebook and WhatsApp to disseminate results for parents. [MULTIMEDIA ACTIVITY]</p>
2	<p>Start interaction with the platform, answering G-Guidance career guidance questionnaire. [PLATFORM ACTIVITY]</p> <p>Presentation and discussion of G- Guidance Vocational areas: <u>Maker</u>, <u>Researcher</u>, <u>Creator</u>, <u>Helper</u>, <u>Leader</u>, <u>Organizer</u></p> <p>Analyze and discuss vocational profiles and ask students to reflect on their profile (results from questionnaire), talking about how much they relate to their profile [INTERPERSONAL ACTIVITY] [SELF-AWARENESS ACTIVITY]</p> <p>Create groups according with vocational profile, discuss and share expectations and what they think they will accomplish career wise in that vocational field. As a result, each group should make a video with their smartphones (or with the computer camera) to upload to the platform and share on social media. [MULTIMEDIA ACTIVITY] [PLATFORM ACTIVITY]</p>
3	<p>Self-awareness activity: Who am I? What are (vocational) strengths and weaknesses? For what do I think they are good for? Fill in this information on the platform questionnaire, make a pitch to the class and get feedback from classmates, teachers and psychologist. [PLATFORM ACTIVITY] [INTERPERSONAL ACTIVITY] [SELF-AWARENESS ACTIVITY]</p> <p>[EXTENSION ACTIVITY] (at home, between sessions): make a description of yourself as a professional 10-15 years in the future and express it as you prefer, through a drawing, photo composition, collage, an essay, a video and upload it to G-Guidance platform. [PLATFORM ACTIVITY] [MULTIMEDIA ACTIVITY]</p>
4	<p>Viewing and discussion about the extension activity of the previous session, moderated by the school psychologist and teachers. [INTERPERSONAL ACTIVITY] [SELF-AWARENESS ACTIVITY]</p> <p>Exploring students' professional values and connect them to career decision making. [SELF-AWARENESS ACTIVITY] [PLATFORM ACTIVITY]</p> <p>Exploring student's personal interests, past and present and connect them with career decision making. Each student chooses a video, a website, a photo or other information they feel represents their personal interests. He/She uploads the information on the platform and after all finish, the result is presented to class and discussed, moderated by school psychologist and teachers. Psychologist and teachers should help make the connection between interests, skills and vocational development and areas [PLATFORM ACTIVITY] [MULTIMEDIA ACTIVITY] [CAREER EXPLORATION ACTIVITY]</p>

5	<p>School psychologist makes a presentation with a description of the national school system, it's main features and paths, connecting them to G-Guidance vocational areas (different one for each country) [CAREER EXPLORATION ACTIVITY]</p> <p>Exploring professional myths and stereotypes by answering a true or false questionnaire in the platform and debating the results in session. [PLATFORM ACTIVITY]</p> <p>[EXTENSION ACTIVITY] (at home, between sessions): ask students to complete 3 WebQuests in the platform, accordingly with their vocational profile. One WebQuest for each of the 3 highest rated areas of their vocational profile. [PLATFORM ACTIVITY] [CAREER EXPLORATION ACTIVITY]</p>
6	<p>Exploring the world of careers. Start working with the Professions Guide. Ask students to go through the professions listed in the guide and, accordingly with their vocational profile highest rated area (as displayed in the platform) and ask them to choose the top 5 professions they felt more identified with, after reading about them and watching the videos. The list should be uploaded into the platform in the end of the task. [PLATFORM ACTIVITY] [MULTIMEDIA ACTIVITY] [CAREER EXPLORATION ACTIVITY]</p> <p>Using the information from the professions guide and research online, students should complete the "Professions Network" activity. This activity should be supported by the psychologist and teachers. [CAREER EXPLORATION ACTIVITY] [PLATFORM ACTIVITY]</p>
7	<p>School Psychologist works with students to build an interview script with 5 relevant questions they would like to ask to a professional from the one of the top 5 professions they chose in a previous session. After the interview is complete, students should work individually or in small groups, accordingly with which professional they chose, and with the help of teachers, colleagues, psychologist and parents, find a way to contact a professional to perform the interview. [CAREER EXPLORATION ACTIVITY] [INTERPERSONAL ACTIVITY] [PLATFORM ACTIVITY]</p> <p>[EXTENSION ACTIVITY] (at home, between sessions): students, working individually, or in groups, should make a video with the interview with the professional they chose. When the video of the interview is ready, students must upload it into the platform. [PLATFORM ACTIVITY] [CAREER EXPLORATION ACTIVITY]</p>
8	<p>Execute activity "Exploring Vocational Environments", an activity that aims to help students to learn more about professions by describing their dress code, physical environment and work instruments of their preferred professions. This activity can be done by photo album or videos, that are to be uploaded into the platform and shared in the class's social media. This activity can be executed using online research in session only or in a combined form between in-session activity and extension activity. [PLATFORM ACTIVITY] [CAREER EXPLORATION ACTIVITY] [MULTIMEDIA ACTIVITY]</p> <p>Ask students to complete 3 WebQuests in the platform, accordingly with their vocational profile. One WebQuest for each of the 3 highest rated areas of their vocational profile. [PLATFORM ACTIVITY] [CAREER EXPLORATION ACTIVITY]</p> <p>[EXTENSION ACTIVITY] (at home, between sessions): ask students to work individually, or in groups, and with the help of psychologists, teachers and parents, collect photos (for example: using their phones) of uniforms, instruments and workplaces, directly on their community.</p>

9	<p>All class watches the interview videos made by students (session 7 activity) with the interview to professionals and discuss the information about the reality of working in each profession. At the end, all class should choose the best videos and share them on the class social media. <b>[INTERPERSONAL ACTIVITY]</b></p> <p><b>[EXTENSION ACTIVITY]</b> (at home, between sessions): build a family tree of professions. Make a composition with information about family members and their professions, using sticky notes, drawings, photos, whatever material students prefer. In the end, they must take a photo of their work and upload it into the platform and/or make a video presentation of their work, explaining their family tree of professions. This information should have the close cooperation of parents and family, for more accurate information and elicit parental cooperation. <b>[CAREER EXPLORATION ACTIVITY]</b> <b>[PLATFORM ACTIVITY]</b></p>
10	<p>Using the professions guide in the platform, online research and support from the psychologist and teachers, students complete the “Vocational Detective” activity. This activity aims to make students aware of the path they will have to walk from the present moment to professional status. The activity should be guided and supported by psychologist and teachers in session <b>[PROJECT BUILDING ACTIVITY]</b></p> <p><b>[EXTENSION ACTIVITY]</b> (at home, between sessions): ask students to complete 3 WebQuests in the platform, accordingly with their vocational profile. One WebQuest for each of the 3 highest rated areas of their vocational profile. <b>[PLATFORM ACTIVITY]</b> <b>[CAREER EXPLORATION ACTIVITY]</b></p>
11*	<p>Provide to students a reflection moment about the vocational exploration made through all the sessions</p> <p>Create an individual career moodboard for each student. Ask students to extract the most important learnings from each session and create a moodboard with short texts, quotes, images and other elements they find interesting. The idea is to keep a product of the sessions capable of showing them their evolution throughout the sessions, as well as possible vocational paths. <b>[SELF-AWARENESS ACTIVITY]</b> <b>[PROJECT BUILDING ACTIVITY]</b> <b>[PLATFORM ACTIVITY]</b></p>
12*	<p>Organize a closing session where students’ families and significant others can see the product of the work done during the vocational exploration. It could be a time for sharing ideas and/or clarifying doubts, as well as promoting the relationship between school and family in a possible vocational decision <b>[EXTENSION ACTIVITY]</b></p>

## 5. Career Guidance Assessment



## 5.1. General Description of Assessment

Assessment process refers to “the scientific and professional activity of collecting, evaluating, and integrating information about a subject using, whenever possible, different sources of information according to a previously-established plan in order to answer a client’s question” (Fernandez-Ballesteros et al., 2001, p.188). Therefore, evaluation is a complex process and implies: (a) decision making regarding the assessment techniques to be used (e.g., interview, questionnaires, observation or other techniques); (b) establish clear objectives about the purpose of the assessment (e.g., description, classification, prediction, explanation and/or control); and (3) actions, such as defining the questions to ask, establishing hypotheses, gathering relevant data, and/or testing hypotheses to solve problems.

Also, assessment process can be divided into four phases: (1) **Analysing information of a participant or group of participants** – this phase refers to the analysis of demands, complaints and/or goals, formulate testable assessment hypotheses, and collect information; (2) **Organizing and reporting results** – it includes the integration and report of results, discuss findings and finally make decision; (3) **Planning the intervention** – when an intervention is required, several assessment operations are needed: selecting specific intervention hypotheses and reviewing and deciding on intervention procedures; and (4) **Evaluation and follow-up** – Which includes collecting data about effects of intervention, analysing intervention outcomes, and following up (planning follow up and assessing results). In sum, the two

first phases focus on description, classification, and prediction, and the two final phases deal with control and intervention objectives.

Children’ and adolescents’ assessment emphasizes different principles (Kamphaus & Frick, 2010):

1. An evidence-based assessment approach, which is based on empirical evidence in terms of both their reliability and validity, as well as their usefulness for prescribed populations and purposes (Mash & Hunsley, 2005);
2. A developmental and process-oriented approach that conceptualize what we are trying to assess and how we’re going to proceed, based on different maturational processes, considering the potential transactional relations between the child and his/her environment and contexts, the stability and continuity of some childhood behavioural, cognitive or emotional functioning, and the processes that lead to the outcomes (not exclusively the outcomes);
3. A situational context and cultural approach considering that an adolescent’s behaviour influences his or her context and is also shaped by the different contexts (family, school, community...);
4. A multi-informant approach that considers different sources of information (e.g., parents, teachers and adolescents) who can report of different settings and perspectives;
5. A comprehensive assessment approach that provides information of many important situational contexts, based on

multiple areas of vocational and personal functioning as well as personal strengths and weaknesses;

6. An ethical approach that can help professionals engage in accurate and fair assessments based on the main ethical principles, such as a legal and ethical requirement to obtain informed consent for these services, following all standardized procedures for administration in the testing process, providing only interpretations that have been supported by research or evidence-based, discussing the results of evaluation with the parents and adolescents allowing to ask questions and understand the results and their implications, administering instruments for competent professionals, and dealing with cultural and gender differences.

## 5.2. G-Guidance Career Guidance: Assessment Framework

Assessment is a very important and integral part of career guidance methodology. This process sets the scene and directions for the student toward his/her journey, but also supports students' self-awareness and self-discovery process. In this sense, G-Guidance Project developed a questionnaire to include an assessment moment its intervention. The main assessment aims are: (1) give students an initial orientation depending on their preferences, skills and attitudes; (2) promote students' self-awareness regarding their strengths and difficulties; (3) make an evaluation of several career guidance constructs – this will be specifically important to school psychologists, so they can access and use reliable information during counselling process; (4) and evaluate the

impact of G-Guidance intervention. Regarding these aims, G-Guidance teams sees assessment as an ongoing process and for this reason, it will have a pre-test and post-test moments. The project's assessment structure should be seen as a reference for future implementations of our career guidance process but does not limit the use of additional measures that might improve the scope and efficacy of the assessment and/or makes it a better fit for the profile of a specific school context and subjects.

About the instruments that can be used, there are numerous measures to assessing various constructs regarding students' career guidance. G-Guidance team has reviewed many of them and after a long process they were able to define a final assessment scheme. This scheme respects the project's theoretical framework, main objectives and provide relevant information about student's career guidance process. Also, it was essential to build an assessment process that was short, reliable and free of charge. That's why we turned to measures developed within the framework of Savickas' Life Construction Theory, such as Career Adaptability Scale (CAAS), Career Cooperation Scale (CCS) and Student Career Construction Inventory (SCCI). We would like very much to also include Savickas' main assessment instrument, namely "Career Construction Interview" (Formerly Career Story Interview), but due to its administration specificities (interview), we decided to include parts of it as separate tasks during the career exploration activities.

For our initial questionnaire, we turned to the roots of classical theories, more properly to Holland's Theory of Career Choice,

one of the pillars of our project's theoretical framework. In order to have an instrument that is allied to our criteria, we had to construct a questionnaire of our own – G-Guidance Questionnaire (cf. annex 1), based on the well-accepted and thoroughly validated RIASEC questionnaire. Besides the Life Construction Theory measures, we have chosen another one that provides information regarding various difficulties within the decision-making process of a career – Career Decision-Making Difficulties (CDDQ). The measures mentioned above are all mandatory in our assessment structure, and students should answer them at the beginning of their career guidance “journey” (except G-Guidance Questionnaire, which is to be filled just at the start) and at the end. It's important to underline that G-Guidance questionnaire is not a part of the assessment structure, as its function is to define an initial vocational profile for each student, as a starting point for the whole career guidance, and not to assess its efficacy.

Besides these measures, we have chosen several measures that are optional, and students can fill them in during their career guidance “journey”, for the purpose of giving additional information for the school psychologists to use in career guidance, namely when they feel that it's necessary in the case of students that are struggling, for some reason, to participate, being motivated or to perform on the career exploration activities. Such measures provide information concerning stable characteristics [Self-efficacy Inventory for Multiple Intelligences (SIMI-40), Personality Assessment Questionnaire, Child (PAQ, Child)], or target other relevant dimensions, such as the quality of interpersonal relation with parents and/or

teachers [Parental Acceptance-Rejection Questionnaire/Control, Child, (PARQ/C, Child), Mother Version, Parental Acceptance-Rejection Questionnaire/Control, Child, (PARQ/C, Child), Father Version, Teacher Acceptance-Rejection Questionnaire/Control (TARQ/C)]. These optional measures are not part of the assessment structure and should be used only as a result of a technical decision of a qualified professional, namely the school psychologist

All the above-mentioned measures are described on the table below (see table 9) to help school psychologists to have a clear overview of the assessment structure proposed by G-Guidance. Besides the assessment measures, at the beginning of the use of the platform students will fill in a short personal data information form (cf. annex 2). All measures have been implemented on the platform and students can see their results in a user-friendly mode.

Table 9. Assessment Measures

Type of use	Instrument	Main aim/s	Scales/Subscales	Assessment moment	
				pre	post
	G-Guidance Questionnaire	Evaluate students' vocational profile.	<p>Scales:</p> <ol style="list-style-type: none"> <li>1. Skills</li> <li>2. Activities/ Interests</li> <li>3. Professions</li> <li>4. Personality traits</li> <li>5. Work environment</li> <li>6. Values</li> </ol> <p>Each scale has six subscales:</p> <ol style="list-style-type: none"> <li>1. Maker</li> <li>2. Researcher</li> <li>3. Creator</li> <li>4. Helper</li> <li>5. Leader</li> <li>6. Organizer</li> </ol>	-	
	Career Adapt-Abilities Scale (CAAS) (Savickas & Porfeli, 2012)	Measure students' career adaptability.	<p>Scales:</p> <ol style="list-style-type: none"> <li>1. Concern</li> <li>2. Control</li> <li>3. Curiosity</li> <li>4. Confidence</li> </ol> <p>Total Score = Career adaptability</p>	-	
Mandatory	Career Cooperation Scale – Balanced version (CCS-B) (Ambiel et al., 2020)	Understand students' active external resources within their community.	<p>Scale:</p> <ol style="list-style-type: none"> <li>1. Cooperation</li> </ol>	-	
	Student Career Construction Inventory (SCCI) (Savickas & Porfeli, 2011)	Measure of career adapting thoughts and behaviors.	<p>Scales:</p> <ol style="list-style-type: none"> <li>1. Self-concept Crystallization</li> <li>2. Occupational Exploration</li> <li>3. Career Decision making</li> <li>4. Skilling or Instrumentation</li> <li>5. Transition from school-to-work</li> </ol>	-	
	Career Decision-Making Difficulties (CDDQ) (Gati, Krausz & Osipow, 1996)	Identify causes of career decision-making difficulties that might be related to (a) delay beginning of the career decision-making process, (b) halt the process before a decision is made or (c) lead to a less than optimal decision. Career indecision can result from a single difficulty or a combination of them.	<p>Scales and each subscale:</p> <ol style="list-style-type: none"> <li>1. Lack of readiness             <ol style="list-style-type: none"> <li>a. Lack of motivation</li> </ol> </li> <li>2. General indecisiveness             <ol style="list-style-type: none"> <li>a. Dysfunctional beliefs</li> <li>b. Lack of information                 <ol style="list-style-type: none"> <li>a. Lack of knowledge about the decision-making process</li> <li>b. Lack of information about the self</li> <li>c. Lack of information about career alternatives</li> <li>d. Lack of information about ways to obtaining information</li> </ol> </li> </ol> </li> <li>3. Inconsistent information             <ol style="list-style-type: none"> <li>a. Unreliable Information</li> <li>b. Internal Conflicts</li> <li>c. External Conflicts</li> </ol> </li> </ol>	-	
	Personal Information Form (PIF)	Collect students' personal data.	-	-	

Type of use	Instrument	Main aim/s	Scales/Subscales	Assessment moment	
				pre	post
	Self-efficacy Inventory for Multiple Intelligences (SIMI40-) (Cejudo, Losada & Pérez-González, 2017)	Evaluate students' self-efficacy for multiple intelligences	Scales: 1. Intrapersonal 2. Naturalist 3. Linguistic 4. Math 5. Spatial 6. Kinesthetic 7. Musical 8. Interpersonal	-	
Opcional	Personality Assessment Questionnaire, Child (PAQ) (Rohner & Ali, 2016)	To assess seven personality dispositions that could be related to interpersonal experiences of acceptance or rejection.	Scales: 1. Hostility and aggression 2. Dependence 3. Self-esteem 4. Self-adequacy 5. Emotional responsiveness 6. Emotional stability 7. Worldview	-	
	Parental Acceptance-Rejection Questionnaire/Control, Child, (PARQ/C, Child) (Rohner & Khaleque, 2005)	Understanding children perception of parental acceptance or rejection.	Scales: 1. Warmth 2. Hostility and aggression 3. Indifference/Neglect 4. Undifferentiated rejection	-	
	Teacher Acceptance-Rejection Questionnaire/Control (TARQ/C) (Rohner & Khaleque, 2005)	Understanding children perception of teacher acceptance or rejection	Scales: 1. Warmth 2. Hostility and aggression 3. Indifference/Neglect 4. Undifferentiated rejection	-	

### 5.2.1. G-Guidance Questionnaire Description

According to Holland's Theory of vocational personalities and work environments, an occupation is an expression of one's personality. The agreement or congruence between one's personality and one's chosen occupation is positively related to the level of job satisfaction and stability. Holland's Theory can be summarized into four assumptions, as described on theoretical overview. G-Guidance project have considered the first assumption - people can be categorized according to six personality types (Realistic, Investigative, Artistic, Social, Enterprising and Conventional, known by the acronym RIA-SEC), to define the following types of personality in the G-Guidance Questionnaire:

a. Maker (related to Holland's "Realistic type", R): Likes to work with animals, tools, or machines; generally, avoids social activities, such as teaching, healing, and informing others; has good skills in working with tools, mechanical or electrical drawings, machines, or plants and animals; values practical things one can see, touch, and use, such as plants and animals, tools, equipment, or machines; and sees self as practical, mechanical, and realistic.

b. Researcher (related to Holland's "Investigative type", I): Likes to study and solve math or science problems; generally, avoids leading, selling, or persuading people; is good at understanding and solving science and math problems; values science; and sees self as precise, scientific, and intellectual.

c. Creator (related to Holland's "Artistic type", A): Likes to do creative activ-

ities, such as art, drama, crafts, dance, music, or creative writing; generally, avoids highly ordered or repetitive activities; has good artistic abilities in creative writing, drama, crafts, music, or art; values the creative arts and likes drama, music, art, or the works of creative writers; and sees self as expressive, original, and independent.

d. Helper (related to Holland's "Social type", S): Likes to do things to help people, such as teaching, nursing, giving first aid, or providing information; generally, avoids using machines, tools, or animals to achieve a goal; is good at teaching, counselling, nursing, or giving information; values helping people and solving social problems; and sees self as helpful, friendly, and trustworthy.

e. Leader (related to Holland's "Enterprising type", E): Likes to lead and persuade people and to sell things and ideas; is good at leading people and selling things or ideas; values success in politics, leadership, or business; and sees self as energetic, ambitious, and sociable.

f. Organizer (related to Holland's "Conventional type", C): Likes to work with numbers, records, or machines in a set, orderly way; generally, avoids ambiguous, unstructured activities; is good at working with written records and numbers in a systematic, orderly way; values success in business; and sees self as orderly and good at following a set plan.

Holland's different personality types have been defined as a result of the combination of skills, preferences, personality traits, values, and work environment. For the content validity process of the

G-Guidance Questionnaire we will consider the following general description and definitions of its dimensions and scales.

So, G-Guidance Questionnaire is an instrument developed to evaluate the main dimensions of Holland's theory, based on the original formulation from the author. The objective of content validity is to evaluate by different experts the clarity, representativeness and relevance of the items of the G-Guidance Questionnaire. Additionally, the need to review and reformulate the item is requested. To do this, judges must read the brief description of the instrument and the instructions for the procedure. Then, the judges must evaluate each item of each scale that has been included in the different dimensions.

The instrument is made up of six vocational dimensions, described on following table (see table 10), and each dimension is divided into six scales based on the six Holland profiles (RIASEC). Thus, the instrument is finally composed of 36 subscales.

Table 10. G-Guidance Questionnaire Vocational Dimensions

Dimensions	Description	Scales
Skills	Self-Awareness These refer to elements of an individual's personality that allow the execution of tasks and determine the successful development of such a task or activity. They are seen as "the potential associated with the natural characteristics of the individual to manage certain situations (Olaz, 2011, p. 610) and the abilities of the individual to the application of knowledge in order to perform tasks and solve problems using any technique (European Commission, 2009).	<p style="text-align: center;">                     Maker                      Researcher                      Creator                      Helper                      Leader                      Organizer                 </p>
Activities/Interests	Interest refers to relations between the individual and an activity or set of activities in a given area (Krapp, 2002; Schiefele (2009). It includes affective (i.e., feelings that are associated with engagement in an activity) and cognitive components (i.e., the perceived engagement, thoughts about the activity and e attribution of personal significance or importance) which are part of individuals' engagement in activities (Renninger and Hidi 2002).	
Professions	Any type of work or jobs that needs special training or a particular skill and people who this type of work is considered as a group. It is also referring to occupation, calling, business or career.	
Personality traits	It concerns to individual differences in characteristic patterns of thinking, feeling and behaving. It focuses on relatively stable human psychological characteristics and regularities that make people alike and that distinguish psychologically one person from another. The set of psychological traits influence his or her interactions with, and adaptations to, the intrapsychic, physical, and social environments. Traits are typically seen as stable constructs rather than skills that need to be developed.	
Work environment	It Refers to the dominant characteristic of a job (autonomy, social interaction, mobility...) and the elements of a work environment linked to the basic psychological needs that seem particularly relevant in the context of activity-based work (need for autonomy, need for relatedness, need for structure).	
Values	The values are related to the beliefs linked to affection and desirable goals that motivate action and indicate what is important to us in life with varying degrees of importance. Values transcend specific actions and situations, serve as standards or criteria and guide the selection of actions, policies, people, and events; and guides attitudes and behaviours in the context	

### 5.2.2. G-Guidance Questionnaire and the Procedure for Content Validity

From a methodological perspective, the first and necessary step in the construction of any measurement instrument is the study and examination of the content validity of the items selected, in accordance with the theoretical reference model. In other words, the sample of indicators (items) must be representative and relevant to the target construct. Otherwise, the questionnaire would probably assume a high margin of error in the delimitation of the construct. These properties are necessary but not sufficient conditions, since it is also necessary to obtain empirical evidence on construct and criterion validity. In the following, we describe the content validity study.

1. The procedure used in this validity content study can be outlined through the following points:
2. We carried out a bibliographic review on the relevant documents related to Holland's Theory.
3. On the basis of the general guidelines founded in the literature review we proposed the dimensions show in the above table.
4. We proceeded to systematize each of these dimensions in the scales Maker, Researcher, Creator, Helper, Leader and Organizer.
5. We made a first exploratory selection of items for each dimension. In Appendix A, we present the population of possible indicators that we took into consideration for the extraction of the sample corresponding to this study.
6. A group of experts was sampled to analyze the content validity of the se-

lected indicators. The sample was composed of experts both in the field of evaluation and measurement, as well as in issues related to vocational guidance. The sample was intentional and carried out on an international scale, it was composed of a total of 11 judges.

7. We sent a questionnaire to the group of selected experts. The questionnaire requested the collaboration of the experts to assess the degree of "suitability-congruence" in the assignment of the different indicators to the dimensions proposed. The instructions submitted to the expert group is presented in Appendix B. The scale used to assess the indicators was as follows: A (high degree of suitability); M (medium degree of suitability); and B (low degree of suitability). Each judge should rate each item in the following criteria:

-Clarity. Refers to whether the item is correctly formulated, and its meaning is understood. The possible answer options are two: No (It is not clear, the item is ambiguous, confusing or does not clearly express what it is trying to evaluate); and Yes (Clear, the item is clear). If the response is NO, please, try to give some suggestion in the columns labelled as "REVIEW/COMMENTS" and "REFORMULATION".

-Representativeness. This criterion refers to whether the item is representative, that is, characteristic or typical of the dimension to which it has been assigned. The possible answer options are three: 1 (low degree of representativeness); 2 (half degree of representativeness); and 3 (high degree of representativeness).

-Relevance. It refers to whether the item is relevant or important to measure the dimension to which it has been assigned. 1 (Not relevant, the item can be eliminated without affecting the dimension measurement); 2 (Not very relevant, the item has some relevance, but it evaluates very secondary aspects of the dimension or are only indirectly related to it); 3 (Relevant, the item reflects important aspects of the dimension evaluated or directly related to it)

Additionally, for each item the judge was asked to include their view about the need to review the item or reformulate it (especially if the response in clarity is “NO”), or if other dimension could be more appropriate to assign the item.

7. From the judges' responses, we calculated Osterlind's (1998) congruence index for each indicator, according to the following equation.

$$I_{ik} = \frac{(N-1)\sum_{j=1}^n X_{ijk} + N\sum_{j=1}^n X_{ijk} - \sum_{j=1}^n X_{ijk}}{2(N-1)n}$$

Where;

$X_{ijk}$  = Assessment of indicator  $i$  in domain  $k$  by judge  $j$ .

$N$  = Number of domains contemplated in the instrument.

$n$  = Number of judges assessing the indicator.

8. In the last step, once the information provided by the different experts on the adequacy of each of the items to measure the dimensions of the G-Guidance questionnaire was obtained, the Osterlind index was used to obtain empirical evidence of content validity. Finally, a selection of the best items according to Osterlind's index was made to obtain the final version of the G-Guidance Questionnaire. The indicators with the highest score ( $lik > 0.5$ ) in the Osterlind index were selected to form part of the questionnaire.



## Conclusion



The career guidance methodology has been designed based on well-known and scientific validated theoretical and methodological perspectives, with an innovative use of technology and digital tools. Two main purposes have been pursued: (a) to develop an integrating career guidance with significant elements of youth's lives such as technology (i.e., computers and smartphones), internet (i.e., websites and social media) and gaming. All these elements try to increase and improve the youth's motivation and engagement with career guidance objectives; (b) to give school psychologists better, updated, and useful tools to perform career guidance with current day students in a more creative way with new career guidance materials as they need, collecting, compiling and systemizing relevant information about their students, and having an easy link to web-based resources that they can use

Three theoretical models have guided the basic methodology of this vocational program: 1) Bronfenbrenner's ecological model that provides an ecological perspective including the importance of educational agents, like parents and teachers, as well as different individuals' contexts and its interactions for vocational development and career construction. As a result, G-Guidance has combined the development of a digital (G-Guidance) platform with a dynamic and effective use of popular social media apps (Facebook and Instagram) to achieve the goal of engaging teachers and parents, even school board members to actively participate and communicate on their youth's career guidance as well as monitor their kids' ongoing work of career guidance; 2) The Savickas's Life Design model frames the career guidance

as a process comparable to a life journey. Through this journey Students have an active role on constructing their career path focusing on self-exploration, reflection and assessment in a process of five phases: (a) self-awareness, (b) vocational profile, (c) career exploration, (d) project building and decision making and (e) career maturity and adaptability. Students become an agent, active learners, and an author about his/her own career. From this perspective, G-Guidance has provided of different activities adjusted to the students' lives, allowing them to construct their self and their vocational profile. A career guidance based on career adaptability has been materialized in the G-Guidance program as a life-span process; and 3) The Holland's Theory of Vocational Choice define the vocational identity according to six personality types and work environments (i.e., Realistic, Investigative, Artistic, Social, Enterprising and Conventional). G-GUIDANCE program has developed its intervention with the aim of promoting the development and exploration of identity vocational based on these vocational areas named as Creator, Researcher, Creative, Altruist/helper, Leader and Organizer. These theoretical approaches have framed all the planning, organization, modules, and activities of career guidance, as well as the use of the G-Guidance platform.

Considering these theoretical framework, G-Guidance program has followed three methodological axis: Career adaptability, to involve planful attitudes, self- and environmental exploration, and informed decision making promoting students' self-awareness and positive attitudes towards career exploration; Digital resources & gamification to promote a significant

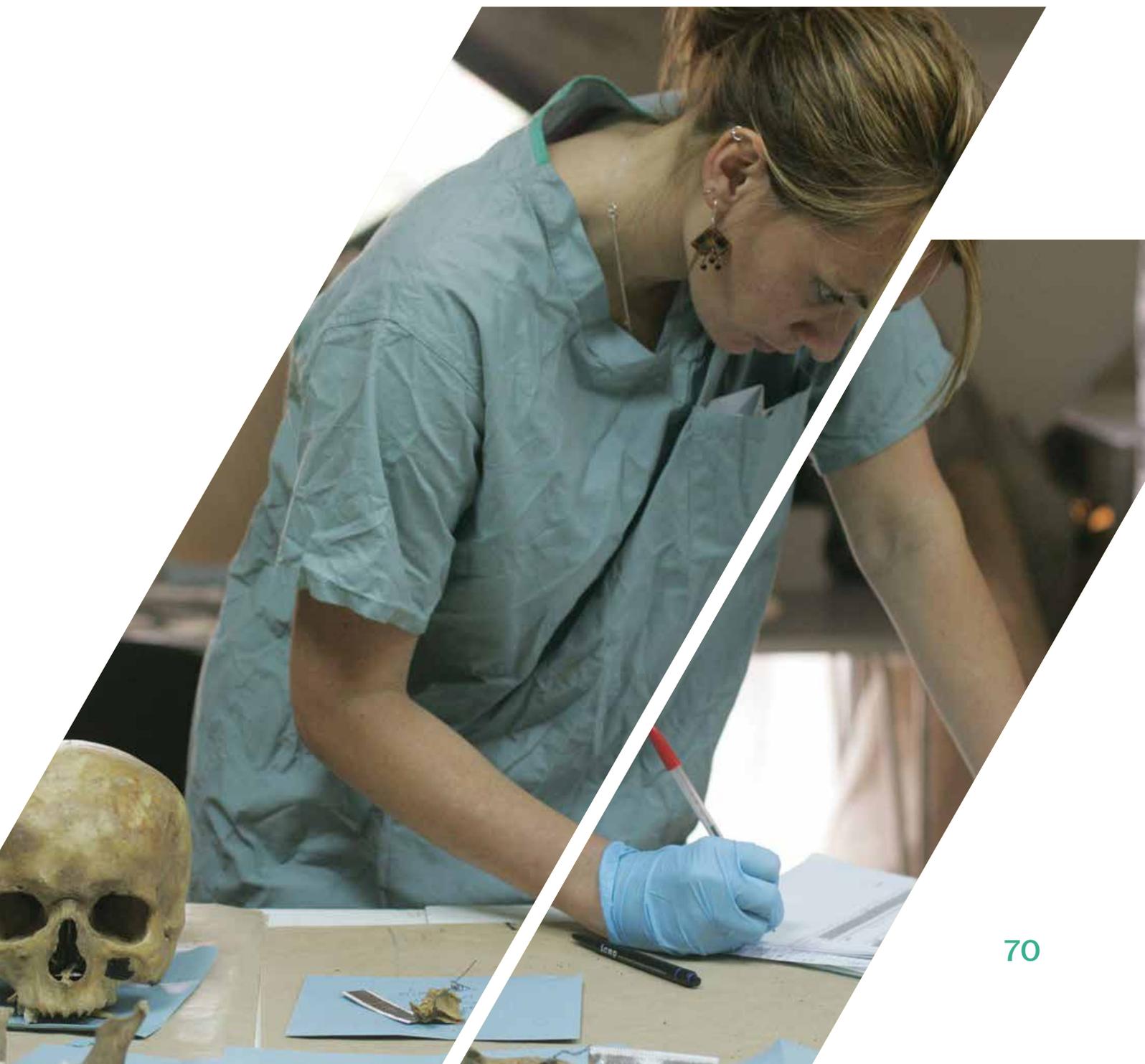
positive effect on students' academic performance (i.e., goal setting and students' persistence on a task and conclude their tasks) and on competence satisfaction, enjoyment and performance (i.e., quick feedback to improve their feeling of competence satisfaction, enjoyment and performance); Evidence-based intervention, guide by previous findings that have been empirically proven with predictable results.

In addition to that, G-guidance has also considered a developmental approach and a counselling procedure. It is essential to understand how vocational development can be impacted by the developmental changes during the adolescent period including physical maturation, brain, cognitive and intellectual progress, social, emotional and personality development. In this regard, G-Guidance platform has included the cognitive and intellectual skills that are expected to emerge during adolescence and the functions that allows students to interact with each other promoting their emotional development and their knowledge about themselves. This developmental approach has been conducted with a counselling procedure understood as a long process to help youths to make career choices and to take educational, learning and vocational decisions.

In conclusion, G-Guidance career guidance method have been based on a complex model, combining elements of structural theories and an integrated career guidance methodology that allow the development of wide variety of tools (i.e., questionnaires, checklists, self-descriptions, role games, different indoor and outdoor, project-based learning or PBL, career guidance activities) for adoles-

cents to perform through the academic year. All these activities have been integrated in a gamified platform to stimulate independent search and analysis of information (skills for working with information resources and channels); self-diagnosis, self-analysis and self-assessment; self-support and specific skills development activities. This platform also analyses each student's preferences, interests, skills, qualities, abilities, values and achievements. Furthermore, data (i.e., scores, professional types, stories, projects-based results and products) can be collected in a student portfolio that allows youths to create and be aware of their own professional profile. The final method previously shown has been implemented in a 12 session plan with a variety of activities to be distributed across the school year

Finally, G-Guidance program has also provided an assessment process to evaluate the efficacy, efficiency, and effectivity of this career guidance method. From a comprehensive assessment process following the principles of an evidence-based assessment, a developmental process-oriented approach, and a situational context, cultural and ethical approach, G-Guidance has designed an assessment framework. This assessment framework allows to give students orientation and self-awareness regarding their strengths and difficulties. Moreover, it is an important tool for school psychologists to have access and use reliable information during the counselling process.



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# Annexes



# Annexe 1. G-Guidance Questionnaire

## G-GUIDANCE QUESTIONNAIRE

### General Instructions

The following questionnaire is the starting point for this path you are now beginning at the platform.

If you already chose your profession, this questionnaire will help you confirm it or suggest other professions for you to consider. If you are completely lost and don't know which profession to choose, this questionnaire will guide you to one, two or three vocational areas for you to explore later at the platform, supported by your school psychologist and your teachers.

Please read the instructions carefully and make sure you answer to all the sentences.

Think about each sentence before you answer. These sentences are related to skills, activities, professions, personality traits, work environment characteristics and values. There aren't right or wrong answers. The best answer is the one that you think best fits what you think and feel.

There is also no time limit.

Let the games begin!

## SKILLS

This section shows a series of skills for performing tasks and solving problems. Please indicate in each of them to what degree you are able to perform them.

Please, rate from 1 "very poor" to 4 "Good" how well you can perform the skills and select the "?" column the skills you are not sure to do well or you have doubts if you able to do it.

	Very poor	Poor	Acceptable	Good	I am not sure, I have doubts
I am able to...	1	2	3	4	?
1. Do painting or sculpture.					
2. Do do-it-yourself work (plumbing, electricity, painting)					
3. Relate with and teach children easily					
4. Find solutions to scientific and technical problems.					
5. keep accurate records of payments and/or sales.					
6. Lead a group work and implement an idea.					
7. Create and maintain order in (organize) documents.					
8. Draw people, cartoons, landscapes, objects, among other things.					
9. Use and operate laboratory equipment (e.g., microscope)					
10. Perform work that requires manual dexterity.					
11. Be a careful, methodic and organized person.					
12. Speak and/or debate at public.					
13. Help people that are upset, troubled, sick and/or vulnerable.					
14. Write stories or poetry well.					
15. Make handmade art pieces.					
16. Work with other people.					
17. Be a successful leader.					
18. Help others with their problems.					

19. Manage databases using a computer.					
20. Be a good salesperson.					
21. Work with power or carpentry tools like drills, grinder or sewing machine.					
22. Describe the function of the white blood cells.					
23. Fix minor breakdowns in household appliances.					
24. Understand the role of DNA in genetics.					

## ACTIVITIES AND INTERESTS

This section includes a list of activities and interests related to the different professions that you may like or interest.

Please, rate from 1 “very little” to 4 “extremely” how much do you like the activities and select the “?” column the activities that you are not sure if you like or not.

	Very little	A little	Very much	Extremely	I am not sure, I have doubts
I like to...	1	2	3	4	?
25. Watch documentaries that deal with the discoveries of science.					
26. Carry out the inventory of a warehouse (receipts and issues)					
27. Participate in a political campaign.					
28. Read scientific books or magazines.					
29. Take care of sick people.					
30. Create art pieces (e.g., paintings, buildings, furniture, clothing, posters, drawings..)					
31. Work on solidarity and charity projects and activities (e.g. volunteer in an NGO)					
32. Write scripts for television series and for the cinema.					
33. Help to guide, advise and/or solve other people's problems.					
34. Work on a scientific project.					
35. Build and repair wooden elements and carpentry.					
36. Write novels, plays or poetry.					
37. Take care of children.					
38. Work in a research laboratory.					
39. Fix electrical and/or mechanical things.					
40. Arrange or compose music (of any kind)					
41. Lead a group in accomplish some goal.					
42. Attend meetings, give interviews and influence others.					

43. Write and file paperwork (e.g. commercial letters, reports, records)					
44. Set up and run your own business.					
45. Take an accounting course.					
46. Work with electricity and electronics.					
47. Handle power tools (drill, saw, phones, clothes sewing machines etc.)					
48. Make calculations for business and bookkeeping.					

## PROFESSIONS

This section includes a list of professions that you may like or be interested in. **Even if the profession you would like is not here, please rate the professions that you like the most.**

Please rate from 1 "very little" to 4 "extremely" how much do you like these professions and select the column "?" professions that you are not sure if you like or not.

	Very little	A little	Very much	Extremely	I am not sure, I have doubts
I like to become a/an...	1	2	3	4	?
49. Musician and/or singer (all types of music)					
50. Mechanic engineer.					
51. Speech Therapist.					
52. Business Executive.					
53. Writer (e.g. novels, sci-fi, horror, fantasy)					
54. Electronics repairman.					
55. Sport Sciences (e.g. Sports teacher, coach)					
56. Real Estate Salesperson.					
57. Social Worker.					
58. Accountant.					
59. Laundryman/woman.					
60. Chemical Engineer (e.g. Industry, Pharmaceuticals)					
61. Small Business Owner.					
62. Marketing & Publicity Manager.					
63. Tax Supervisor/Inspector.					
64. Farmer.					
65. Economist.					
66. Courthouse Administrative Worker.					
67. Actor/Actress.					
68. Physicist.					
69. Dancer (all types of dance)					
70. Bank Worker.					
71. Researcher (science, technology, engineering, mathematics)					
72. Artist (e.g. painting, sculpting)					
73. Secretary					

74. Teacher (preschool, high school, special needs)					
75. Biologist (e.g. Zoo)					
76. Psychologist (e.g. School, Community, Clinical)					
77. Biomedical Engineer.					
78. Car mechanic.					

## PERSONAL CHARACTERISTICS

This section shows a list of characteristics that may describe a person, it means, the way a person thinks, feels and behaves. Please rate on each statement: 1 “The sentence does not describe yourself at all”, 2 “The sentence describes yourself a bit” 3 “The sentence is a neutral description of yourself” 4 “The sentence describes yourself a lot”

	does not describe my-self at all	describes my-self a bit	is a neutral description of myself	describes my-self a lot	I am not sure, I have doubts
This sentence:	1	2	3	4	?
79. I am an analytical, intellectual and scientific person.					
80. I tend to be very independent and practical minded.					
81. I am especially sensitive to music, painting or feelings.					
82. I am a cooperative and supporting person.					
83. I am a talented person to organize and manage a task.					
84. I feel uncomfortable when things are a mess.					
85. I find it easy to influence and persuade or convince people of something I want.					
86. I really enjoy exploring the world and the things around me.					
87. I tend to do things my way, self-expressing.					
88. I tend to use my mind and analyse information to understand things.					
89. I feel comfortable when I have power and status in a team.					
90. I tend to be more chaotic than organized.					
91. I am a very detail-oriented person.					
92. I am a curious person who enjoys asking questions about everything.					
93. I work and strive for money or material benefits.					
94. It is easy for me to establish contacts and relationships with other people.					
95. Detailed tasks are easy for me.					
96. I have a vivid imagination and fantasy.					
97. I try to be in charge and to lead others.					
98. I continually wonder the why of things.					

99. I am a practical person who tends to focus on real and concrete things.					
100. I always get the job done and carry out my plans.					
101. I feel confident using feelings, words and ideas to work with people.					
102. I do not mind breaking rules and conventions.					
103. I am used to tackling tasks in a practical way with different tools.					
104. I am a friendly person and make friends easily.					
105. I like solving concrete problems by doing something physical/tangible/concretionary.					
106. I avoid being in a position of authority or power.					
107. I tend to focus on people's concerns and feelings.					
108. I choose tasks and activities that allow me to work with a toolkit.					

## WORK ENVIROMENT

This section shows a list of characteristics of a job (for example, autonomy, independence, social or team relationships, mobility ...) and the elements of a work environment in which you would like to work.

Please, rate from 1 "very little" to 4 "extremely" how much do you like the work characteristics or elements and select the "?" column the work characteristic or element that you are not sure if you like or not.

	Very little	A little	Very much	Extremely	I am not sure, I have doubts
I would like...	1	2	3	4	?
109. Work on projects with no rigid time limit.					
110. To work in contact with people.					
111. Work in hierarchical structures: bosses, managers and subordinates.					
112. Working under pressure.					
113. Working alone.					
114. Changing and diverse workplaces, not always the same.					
115. To work in cooperative environments: working together to achieve common goals.					
116. Competitive environments: working alone trying to be the best and achieve my goals.					
117. My job to allow me to interact with different people.					
118. To carry out my work always in the same city.					
119. To work in places with different people and groups.					
120. To work in quiet and quiet places).					
121. To work in contact with nature.					
122. To work without anyone telling me what to do.					

123. Work in individual offices or desks.					
124. Structured environments: organized, constant, routine.					
125. Work in dynamic, changing, fun spaces.					
126. To work outside the home.					
127. Work with a fixed schedule.					
128. Working outdoors.					

## VALEUS AND PRINCIPLES

This section shows a list of desirable goals and beliefs that motivate action and indicate what is important to us in life and guide our behavior, the people we want to stay with, and the actions we want to take.

Please, rate in what extend you think the below ideas or principles are important for you and your life: 1 "Unimportant"; 2 "Slightly Important", 3 "Moderately Important", 4 "Very Important"

	Unimportant to me and my life	Slightly Important to me and my life	Moderately Important to me and my life	Very Important to me and my life	I am not sure, I have doubts
This value and principle is:	1	2	3	4	?
129. Spend time studying and researching.					
130. Have self-discipline.					
131. Live in a safe and secure environment.					
132. Have a lot of money.					
133. Understand the theory and reasons behind what happens in life.					
134. Be efficient and skilled.					
135. Have a varied and diverse life.					
136. Be very rigorous in our opinions and very assertive to defend what we have evidence of.					
137. Being an honest and loyal person to my friends.					
138. To have social prestige and recognition.					
139. Follow and obey the rules even when no one is around.					
140. Have many skills and abilities to solve everyday problems.					
141. Have a good knowledge of the world and its phenomena.					

142. Enjoy things and life to the fullest.					
143. Be well prepared and educated.					
144. Be creative and imaginative.					
145. Being an understanding person.					
146. Have a realistic approach to life and the world around me.					
147. Take care of the people around you.					
148. Find new and different experiences.					
149. Help people.					
150. Treating all people equally, fairly.					
151. Surround yourself with pretty and beautiful things.					
152. Respect the rules of coexistence.					
153. Have ambition.					
154. Do everything that people think is right.					
155. Achieve power in work and life.					
156. Being successful in your professional life.					

END OF QUESTIONNAIRE

PLEASE CHECK THAT ALL ITEMS HAVE BEEN ANSWERED  
THANK YOU VERY MUCH

## SCORING SHEET: RESULTS AND INTERPRETATION

### PROFILE OF SKILLS

(Nº Items: 24; Items from nº 1 to nº 24)

*Score:* Score: obtain the sum of the items corresponding to each Holland's dimension (M, R, C, H, L, O) in addition to the Scale of uncertainty or indefinición (?). Higher scores in a dimension indicate the best fit in that dimension. Four items per dimension. Minimum score: 0; Maximum score: 16

1. M – Maker: 2,10, 21, 23
2. R – Researcher: 4, 9, 22, 24
3. C – Creator (Creative): 1, 8, 14, 15
4. H – Helper/Communicator (Helping/Communicative): 3, 13, 16, 18
5. L – Leader: 6, 12, 17, 20
6. O – Organizer: 5, 7, 11, 19
7. Degree of in-definición (?): Minimum score: 0; Maximum score: 24

### PROFILE OF ACTIVITIES

(Nº Items: 24; Items from nº 25 to nº 48)

*Score:* Score: obtain the sum of the items corresponding to each Holland's dimension (M, R, C, H, L, O) in addition to the Scale of uncertainty or indefinición (?). Higher scores in a dimension indicate the best fit in that dimension. Four items per dimension. Minimum score: 0; Maximum score: 16

8. M – Maker: 35, 39, 46, 47
9. R – Researcher: 25, 28, 34, 38
10. C – Creator (Creative): 30, 32, 36, 40
11. H – Helper/Communicator (Helping/Communicative): 29, 31, 33, 37
12. L – Leader: 27, 41, 42, 44
13. O – Organizer: 26, 43, 45, 48
14. Degree of in-definición (?): Minimum score: 0; Maximum score: 24

### PROFILE OF PROFESSIONS

(Nº Items: 30; Items from nº 49 to nº 78)

*Score:* Score: obtain the sum of the items corresponding to each Holland's dimension (M, R, C, H, L, O) in addition to the Scale of uncertainty or indefinición (?). Higher scores in a dimension indicate the best fit in that dimension. Five items per dimension. Minimum score: 0; Maximum score: 20

15. M – Maker: 50, 54, 59, 64, 78
16. R – Researcher: 60, 68, 71, 75, 77
17. C – Creator (Creative): 49, 53, 67, 69, 72
18. H – Helper/Communicator (Helping/Communicative): 51, 55, 57, 74, 76
19. L – Leader: 52, 56, 61,62, 65
20. O – Organizer: 58, 63, 66, 70, 73
21. Degree of in-definición (?): Minimum score: 0; Maximum score: 30

### PROFILE OF PERSONALITY TRAITS

(Nº Items: 30; Items from nº 79 to nº 108)

*Score:* Score: obtain the sum of the items corresponding to each Holland's dimension (M, R, C, H, L, O). Higher scores in a dimension indicate the best fit in that dimension. Five items per dimension. Minimum score: 5; Maximum score: 20

22. M – Maker: 80, 99, 103, 105, 108
23. R – Researcher: 79, 86, 88, 92, 98
24. C – Creator (Creative): 81, 87, 90, 96, 102
25. H – Helper/Communicator (comunicative): 82, 94, 101, 104, 107
26. L – Leader: 83, 85, 89, 93, 97
27. O – Organizer: 84, 91, 95, 100, 106
28. Degree of in-definición (?): Minimum score: 0; Maximum score: 30

### PROFILE OF WORK ENVIRONMENT

(Nº Items: 20; Items from nº 109 to nº 128)

*Score:* Score: obtain the sum of the items corresponding to each Holland's dimension (M, R, C, H, L, O) in addition to the Scale of uncertainty or indefinición (?). Higher scores in a dimension indicate

the best fit in that dimension. Three, Four or Five items per dimension. Minimum-Maximum score depending on the dimension.

29. M – Maker (n° items= 3): 121, 126, 128  
(Minimum score: 0; Maximum score: 12)
30. R – Researcher (n° items= 3): **113\***, 118, 120  
(Minimum score: 0; Maximum score: 12)
31. C – Creator (Creative) (n° items= 4): 109, 114, **118\***, 125  
(Minimum score: 0; Maximum score: 16)
32. H – Helper/Communicator (n° items= 4): 110, 115, 117, 119  
(Minimum score: 0; Maximum score: 16)
33. L – Leader (n° items=4): 112, 116, **118**, 122  
(Minimum score: 0; Maximum score: 16)
34. O – Organizer (n° items=5): 111, **113**, 123, 124, 127  
(Minimum score: 0; Maximum score: 20)
35. Degree of in-definition (?): Minimum score: 0; Maximum score: 20

(\*) Items 113 and 118 are loaded in different dimensions

### PROFILE OF VALUES

**(N° Items: 28; Items from n° 129 to n° 156)**

*Score:* Score: obtain the sum of the items corresponding to each Holland's dimension (M, R, C, H, L, O). Higher scores in a dimension indicate the best fit in that dimension. Three or Five items per dimension. Minimum-Maximum score depending on the dimension.

36. M – Maker (n° items= 3): 134, 140, 146  
(Minimum score: 3; Maximum score: 12)
37. R – Researcher (n° items= 5): 129, 133, 136, 141, 143  
(Minimum score: 5; Maximum score: 20)
38. C – Creator (Creative) (n° items= 5): 135, 142, 144, 148, 151  
(Minimum score: 5; Maximum score: 20)
39. H – Helper/Communicator (n° items= 5): 137, 145, 147, 149, 150  
(Minimum score: 5; Maximum score: 20)
40. L – Leader (n° items=5): 132, 138, 153, 155, 156  
(Minimum score: 5; Maximum score: 20)
41. O – Organizer (n° items=5): 130, 131, 139, 152, 154  
(Minimum score: 5; Maximum score: 20)
42. Degree of in-definition (?): Minimum score: 0; Maximum score: 28

### COMPLEMENTARY INDEXES

**GLOBAL INDEX.** It refers to the consistency/inconsistency of the profile across all sections (i.e. skills, activities, professions, personality, work environment and values) of the G-Guidance questionnaire

43. **MGI (Maker Global Index):** sum of Maker-dimensions of all sections  
(n° items: 24 items; Minimum score: 0; Maximum score: 96)
44. **RGI (Researcher Global Index):** sum of Researcher-dimensions of all sections  
(n° items: 26 items; Minimum score: 0; Maximum score: 104)
45. **CGI (Creator Global Index):** sum of Creator-dimensions of all sections  
(n° items: 36 items; Minimum score: 0; Maximum score: 144)
46. **HGI (Helper Global Index):** sum of Helper-dimensions of all sections  
(n° items: 37 items; Minimum score: 0; Maximum score: 148)
47. **LGI (Leader Global Index):** sum of Leader-dimensions of all sections  
(n° items: 37 items; Minimum score: 0; Maximum score: 148)
48. **OGI (Organizer Global Index):** sum of Organizer-dimensions of all sections  
(n° items: 38 items; Minimum score: 0; Maximum score: 152)
49. **IGI (Indefinition Global Index):** sum of Indefinition-dimensions of all sections  
(n° items: 156 items; Minimum score: 0; Maximum score: 156)

## Annexe 2. Career Adapt-Abilities Scale (CAAS)

### Career Adapt-Abilities Scale (CAAS)

Mark L. Savickas & Erik J. Porfeli, 2011

Different people use different strengths to build their careers. No one is good at everything, each of us emphasizes some strengths more than others. Please rate how strongly you have developed each of the following abilities using the scale below.

STRENGTHS	Strongest	Very Strong	Strong	Somewhat Strong	Not Strong
	5	4	3	2	1
1. Thinking about what my future will be like					
2. Realizing that today's choices shape my future					
3. Preparing for the future					
4. Becoming aware of the educational and vocational choices that I must make					
5. Planning how to achieve my goals					
6. Concerned about my career					
7. Keeping upbeat					
8. Making decisions by myself					
9. Taking responsibility for my actions					
10. Sticking up for my beliefs					
11. Counting on myself					
12. Doing what's right for me					
13. Exploring my surroundings					
14. Looking for opportunities to grow as a person					
15. Investigating options before making a choice					
16. Observing different ways of doing things					
17. Probing deeply into questions that I have					
18. Becoming curious about new opportunities					
19. Performing tasks efficiently					
20. Taking care to do things well					
21. Learning new skills					
22. Working up to my ability					
23. Overcoming obstacles					
24. Solving problems					

## Annexe 3. Career Cooperation Scale - Balanced version (CCS-B)

### Career Cooperation Scale - Balanced version (CCS-B)

Ambiel, Savickas & Porfeli, 2020

Next, some behaviours that people can have in face of situations that occur during their careers will be presented. Think about your own career and evaluate how often you behave according to what is described in the sentences. Please mark the answer according to your current moment, that is, according to the way you see yourself, today. Use the following scale:

1	2	3	4	5
Never	Less than half of times	Half of times	More than half of times	Always

Items	Never	Less than half of times	Half of times	More than half of times	Always
1. I cooperate with others on group projects					
2. I play my part on a team					
3. I compromise with other people					
4. I learn to be a good listener					
5. I share with others					
6. I have difficulties working in a group					
7. I stop doing things in teamwork					
8. I avoid making commitments to other people					
9. I pay little attention to what others say					
10. I keep what I have / know for myself					

## Annexe 4. Student Career Construction Inventory (SCCI)

### Student Career Construction Inventory (SCCI)

Savickas & Porfeli, 2011

Please indicate how much thinking or planning you have done about each one using the following scale.

- 5 = I have already done this  
 4 = I am now doing what needs to be done  
 3 = I know what to do about it  
 2 = I have thought about it but do not know what to do about it  
 1 = I have not yet thought much about it

Activities	5	4	3	2	1
1. Forming a clear picture of my personality					
2. Recognizing my talents and abilities					
3. Determining what values are more important to me					
4. Knowing how other people view me					
5. Identifying people that want to be like					
6. Finding out what my interests are					
7. Setting goals for myself					
8. Interviewing people in a job that I like					
9. Discussing my career with teachers and advisors					
10. Learning about different types of jobs					
11. Reading about occupations					
12. Investigating occupations that might suit me					
13. Working a part-time job related to my interests					
14. Determining the training needed for jobs that interest me					
15. Deciding what I really want to do for a living					
16. Finding a line of work that suits me					
17. Selecting an occupation that will satisfy me					
18. Planning how to get into the occupation I choose					
19. Reassuring myself that I made a good occupation choice					
20. Developing special knowledge or skill that will help me get the job I want					
21. Finding opportunities to get the training and experience I need					
22. Beginning the training I need for my preferred job					
23. Qualifying for the job that I like best					
24. Making plans for my job search					
25. Getting a job once I complete my education or training					

## Annexe 5. Career Decision-Making Difficulties (CDDQ)

### Career Decision-Making Difficulties (CDDQ) (Gati, Krausz & Osipow, 1996)

The purpose of this short questionnaire (5-8 minutes) is to identify the difficulties that you might experience while choosing a career or a college major.

You will be presented with a list of statements concerning the career decision-making process. You will be asked to indicate the extent to which each statement describes you on a 1-9 scale (1- does not describe me, 9 - describes me well).

After filling out the questionnaire you will receive personalized feedback about the causes of your difficulties in choosing a career or a major and recommendations to overcome them.

-----  
---

Have you considered what field you would like to major in or what occupation you would like to choose?

Yes / No

If so, to what extent are you confident of your choice?

Not confident at all 1 2 3 4 5 6 7 8 9 Very confident

Next, you will be presented with a list of statements concerning the career decision-making process. Please rate the degree to which each statement applies to you on the following scale:

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

Circle 1 if the statement does not describe you and 9 if it describes you well. Of course, you may also circle any of the intermediate levels.

Please do not skip any question.

For each statement, please circle the number which best describes you.

1. I know that I have to choose a career, but I don't have the motivation to make the decision now ("I don't feel like it").

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

2. Work is not the most important thing in one's life and therefore the issue of choosing a career doesn't worry me much.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

3. I believe that I do not have to choose a career now because time will lead me to the "right" career choice.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

4. It is usually difficult for me to make decisions.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

5. I usually feel that I need confirmation and support for my decisions from a professional person or somebody else I trust.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

6. I am usually afraid of failure.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

7. I like to do things my own way.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

8. I expect that entering the career I choose will also solve my personal problems.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

9. I believe there is only one career that suits me.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

10. I expect that through the career I choose I will fulfill all my aspirations.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

11. I believe that a career choice is a one-time choice and a life-long commitment.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

12. I always do what I am told to do, even if it goes against my own will.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

13. I find it difficult to make a career decision because I do not know what steps I have to take.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

14. I find it difficult to make a career decision because I do not know what factors to take into consideration.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

15. I find it difficult to make a career decision because I don't know how to combine the information I have about myself with the information I have about the different careers.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

16. I find it difficult to make a career decision because I still do not know which occupations interest me.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

17. I find it difficult to make a career decision because I am not sure about my career preferences yet (for example, what kind of a relationship I want with people, which working environment I prefer).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

18. I find it difficult to make a career decision because I do not have enough information about my competencies (for example, numerical ability, verbal skills) and/or about my personality traits (for example, persistence, initiative, patience).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

19. I find it difficult to make a career decision because I do not know what my abilities and/or personality traits will be like in the future.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

20. I find it difficult to make a career decision because I do not have enough information about the variety of occupations or training programs that exist.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

21. I find it difficult to make a career decision because I do not have enough information about the characteristics of the occupations and/or training programs that interest me (for example, the market demand, typical income, possibilities of advancement, or a training program's prerequisites).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

22. I find it difficult to make a career decision because I don't know what careers will look like in the future.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

23. I find it difficult to make a career decision because I do not know how to obtain additional information about myself (for example, about my abilities or my personality traits).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

24. I find it difficult to make a career decision because I do not know how to obtain accurate and updated information about the existing occupations and training programs, or about their characteristics.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

25. I find it difficult to make a career decision because I constantly change my career preferences (for example, sometimes I want to be self-employed and sometimes I want to be an employee).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

26. I find it difficult to make a career decision because I have contradictory data about my abilities and/or personality traits (for example, I believe I am patient with other people but others say I am impatient).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

27. I find it difficult to make a career decision because I have contradictory data about the existence or the characteristics of a particular occupation or training program.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

28. I find it difficult to make a career decision because I'm equally attracted by a number of careers and it is difficult for me to choose among them.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

29. I find it difficult to make a career decision because I do not like any of the occupation or training programs to which I can be admitted.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

30. I find it difficult to make a career decision because the occupation I am interested in involves a certain characteristic that bothers me (for example, I am interested in medicine, but I do not want to study for so many years).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

31. I find it difficult to make a career decision because my preferences cannot be combined in one career, and I do not want to give any of them up (e.g., I'd like to work as a free-lancer, but I also wish to have a steady income).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

32. I find it difficult to make a career decision because my skills and abilities do not match those required by the occupation I am interested in.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

33. I find it difficult to make a career decision because people who are important to me (such as parents or friends) do not agree with the career options I am considering and/or the career characteristics I desire.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

34. I find it difficult to make a career decision because there are contradictions between the recommendations made by different people who are important to me about the career that suits me or about what career characteristics should guide my decisions.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

Finally, how would you rate the degree of your difficulty in making a career decision?

Low 1 2 3 4 5 6 7 8 9 High

**PERSONAL INFORMATION FORM**

Date \_\_\_\_\_

School \_\_\_\_\_

Name \_\_\_\_\_

1. **Age** How old are you? (years)

2. **Gender** 1. Boy 2. Girl \_\_\_3. Other

3. **What grade are you in?** \_\_\_\_\_

**4. Parents' Education**

What is the highest level of education of your parents?	Mother	Father
• Elementary school		
• Middle school		
• High school		
• Bachelor Degree		
• Master Degree		
• Doctoral Degree		

**5. Parents' Occupation**

What is usually the profession or professional occupation of your parents?	Mother	Father

What is now the occupation status of your parents?	Mother	Father
• Employed		
• Full-time		
• Part-time		
• Freelancer / Consultant, etc.		
• Unemployed		
• Retired		

**6. Family Structure**

Who do you live with? \_\_\_\_\_

Which family member has more influence on you?  
-----

Do you have brothers or sisters? -----

If yes, how many brothers and sisters do you have? (Write the number in)

Brothers ----- Sisters -----

How old are all your siblings?

My brother ----- My brother ----- My brother -----

My sister ----- My sister ----- My sister -----

If any of your brother(s) or sister(s) are older what do they study / work?

-----

# Annexe 6. Personal Information Form

## PERSONAL INFORMATION FORM

Date \_\_\_\_\_

School \_\_\_\_\_

Name \_\_\_\_\_

1. **Age** How old are you? (years)

2. **Gender** 1. Boy 2. Girl \_\_\_3. Other

3. **What grade are you in?** \_\_\_\_\_

### 4. Parents' Education

What is the highest level of education of your parents?	Mother	Father
• Elementary school		
• Middle school		
• High school		
• Bachelor Degree		
• Master Degree		
• Doctoral Degree		

### 5. Parents' Occupation

What is usually the profession or professional occupation of your parents?	Mother	Father

What is now the occupation status of your parents?	Mother	Father
• Employed • Full-time • Part-time • Freelancer / Consultant, etc.		
• Unemployed		
• Retired		

### 6. Family Structure

Who do you live with? \_\_\_\_\_

Which family member has more influence on you?  
\_\_\_\_\_

Do you have brothers or sisters? \_\_\_\_\_

If yes, how many brothers and sisters do you have? (Write the number in)

Brothers \_\_\_\_\_ Sisters \_\_\_\_\_

How old are all your siblings?

My brother \_\_\_\_\_ My brother \_\_\_\_\_ My brother \_\_\_\_\_

My sister \_\_\_\_\_ My sister \_\_\_\_\_ My sister \_\_\_\_\_

If any of your brother(s) or sister(s) are older what do they study / work?

\_\_\_\_\_



# Appendixes



## Appendix A. Item Bank for the Content Validity Study

### G-Guidance Questionnaire

#### Skills

MAKER	
	I can change a car's oil or tires
	I have worked with power or carpentry tools like drills, grinder or sewing machine
	I know how to use voltage reader
	I can fix minor breakdowns in household appliances
	I can do do-it-yourself work (plumbing, electricity, painting)
	I can perform work that requires manual dexterity
	I can dismantle and assemble an electronic device
	I can assemble and repair simple furniture
	I can demonstrate strength or endurance
	I can take care of animals regularly
RESEARCHER	
	I know how an electrical circuit works
	I can perform a simple scientific experiment
	I can describe the function of the white blood cells
	I can interpret simple chemical formulae
	I can understand why man-made satellites don't fall to earth
	I can understand the role of DNA in genetics
	I can operate computer equipment for research purposes
	I can offer solutions to problems related to the scientific and technical field
I can use and operate laboratory equipment (microscope)	
CREATOR	
	I can play a musical instrument and/or sing
	I can do painting or sculpture
	I can draw people, cartoons, landscapes, objects, among other things
	I can design clothing, posters or furniture
	I can write stories or poetry well
	I can dance ballet, modern dance or hip hop
	I can take photographs and make video recordings
	I can play a role in a play or a movie
	I can decorate a house or a business
I can make handmade art pieces	
HELPER	
	I can easily talk with all kinds of people
	I have participated in charity, solidarity and/or community work
	People seek me out to tell me about their problems
	I can relate with and teach children easily
	I know how to organize and cheer up a party or a gathering of people
	I'm good at helping people that are upset, troubled, sick and/or vulnerable
	I am good at working with other people
	I can help others with their problems
	I can contact and establish relationships with others
I can understand the feelings of others	

LEADER	
	I know how to be a successful leader
	I'm a good at public speaking and/or debating
	I have higher levels of energy and enthusiasm than most people
	I'm good at getting people to see me and do things my way
	I'm a good salesperson
	I have organized or managed a group, club or association
	I can be very persuasive
	I can lead group work and implement an idea
	I can develop marketing tasks (make a business or product well known to others)
	I think I have the skills to start or set up my own business
ORGANIZER	
	I can file correspondence and other papers
	I have worked at an office or any other administrative job
	I can keep accurate records of payments and/or sales
	I can follow instructions, rules and plans very easily
	I can write business letters (e.g. asking for a budget)
	I am a careful, methodic and organized person
	I can record, manage and maintain information using the internet (personal page, online storage, blog, etc.)
	I can manage databases using a computer
	I can handle office equipment (fax, photocopier, calculator...)
	I can create and maintain order in (organize) documents

## Activities

	Fix electrical and/or mechanical things
	Take a technology course (e.g. industrial, workshop, mechanics)
	Take a culinary course
	Work with electricity and electronics
	Drive a bus or truck
	Handle power tools (drill, saw, etc.)
	Install and repair fixed and mobile phones
	Fix computers
	Build and repair wooden elements and carpentry
	Participate in sports competition
RESEARCHER	
	Read scientific books or magazines
	Work in a research laboratory
	Work on a scientific project
	Study and build rocket models
	Do chemistry experiments
	Solve mathematical and/or scientific problems using the computer
	Watch documentaries that deal with the discoveries of science
	Taking a course in the handling of laboratory equipment
	Analyze the causes and consequences of climate change
	Research how different mental disorders can be solved or cured

CREATOR	
	Sketch, draw or paint
	Design buildings, furniture, clothing and posters
	Play an instrument in a band, group or orchestra
	Write novels, plays or poetry
	Arrange or compose music (of any kind)
	Go to theater, cinema, music concerts or art galleries
	Perform audiovisual montages by experimenting with images and sounds
	Design advertisements for television or magazines
	Write scripts for television series and for the cinema
	Create art pieces
	HELPER
Go to conferences to see important educators and therapists	
Read Psychology books or articles	
Work on solidarity and charity projects and activities (e.g. volunteer in an NGO)	
Help people victim of violence and discrimination	
Taking care of children	
Make new friendships and go to social and civic events (e.g. sports, parties, demonstrations)	
Help to guide, advise and/or solve other people's problems	
Take care of sick people	
Protecting the interest of others	
Reading about historical events	
LEADER	
	Learn strategies for business success
	Sell things
	Lead a group in accomplish some goal
	Participate in a political campaign
	Attend meetings, give interviews and influence others
	Read business magazines or articles
	Supervise and direct the work of others
	Set up and run your own business
	Negotiate or bargain for profit or goods
Persuading others with my ideas (convincing others)	
ORGANIZER	
	Make calculations for business and bookkeeping
	Set up a record-keeping system
	Take an accounting course
	Take an inventory of supplies and products
	Write and file paperwork (e.g. commercial letters, reports, records)
	Take a management or commerce course
	Work in an office
	Carry out the inventory of a warehouse (receipts and issues) (48)
	Fill out forms (90)
Manage and process records of expenses (e.g. documentation, filling receipts)	

## Professions

MAKER	
	Car mechanic
	Truck driver
	Electronics repairman
	Mechanic engineer
	Farmer
	Electrician
	Helicopter pilot
	Sound technician
	Fireman
	Solar panel installation technician
RESEARCHER	
	Software Developer (programmer)
	Civil Engineer
	Chemical Engineer (e.g. Industry, Pharmaceuticals)
	Researcher (science, technology, engineering, mathematics)
	Biomedical Engineer
	Veterinarian
	Medical doctor (all specialties)
	Physicist
	Environmental engineer
Biologist (e.g. Zoo)	
CREATOR	
	Poet
	Musician and/or singer (all types of music)
	Dancer (all types of dance)
	Actor/Actress
	Writer (e.g. novels, sci-fi, horror, fantasy)
	Artist (e.g. painting, sculpting)
	Photographer
	Entertainer (e.g. comedy, youtube, radio, tv shows)
	Designer (e.g. clothes, interiors, marketing)
Graphic designer (e.g. computer games, comics, multimedia)	
HELPER	
	Psychologist (e.g. School, Community, Clinical)
	Sociologist
	Teacher (preschool, highschool, special needs)
	Speech Therapist
	Human Resources Manager
	Sport Sciences (e.g. Sports teacher, coach)
	Social Worker
	Journalist (e.g. TV, Web, Printed Press)
	Public Relations
Guide and or Interpreter for deaf and blind people	

LEADER	
	Economist
	Marketing & Publicity Manager
	Business Executive
	Hotel Manager
	Real Estate Salesperson
	Sales Manager
	Sports Manager
	Small Business Owner
	Insurance Salesperson
	Lawyer
ORGANIZER	
	Accountant
	Secretary
	Financial Analyst
	Bank Worker
	Tax Supervisor/Inspector
	Telemarketing Operator
	Courthouse Administrative Worker
	Translator
	Administrator in a civil service (e.g. town hall)
Hotel frontdesk worker	

### Personality Traits

MAKER	
	I consider myself a practical person who tends to focus on real and concrete things.
	I feel confident when using my body to relate to the physical world.
	I like solving concrete problems by doing something physical
	I deal well with the physical world (the world that we see around us and we experience)
	I tend to be very independent and practical minded
	I tend to be strong and aggressive.
	I am more conservative than liberal
	I can describe myself as practical and tool-oriented to tackle tasks
	I am a very organized person
	I am always busy - always on the go
	I take control of situations and tasks
I choose tasks and activities that allow working alone	

RESEARCHER	
	I tend to focus on ideas instead of facts when they are involved with people
	I usually collect information and analyze situations before making decisions
	I am a curious person who enjoys asking questions about everything.
	I consider myself as highly intelligent and smart
	I tend to be introverted and find it difficult to lead and persuade people.
	I tend to use my mind and analyze information to understand things.
	I can describe myself as analytical, intellectual and scientific
	I really enjoy exploring the world and the things around me
	I avoid philosophical discussions (-)
	I am a lonely person
	Abstract ideas are easy for me to understand
	I tend to be involved in theoretical discussions
	If I have to make decisions I focus mainly on reason
	I am very interested in understanding the phenomena that occur in nature.
	I continually wonder the why of things
CREATOR	
	I am a creative, original and inventive person
	I tend to be more chaotic than organized
	I am especially sensitive to music, painting or feelings
	I often find myself focused on a project and forget everything around me
	I try to solve problems by creating something new and different
	When I have a new idea, opposition from people does not discourage me
	I tend to achieve better results when I work alone and independently
	I do not feel confident following a clear set of rules
	I tend to do things my way, self-expressing
	I have a vivid imagination and fantasy
	I am very spontaneous and I act without thinking
	I tend to the fantasy and imagine things about life
	I am often involved in fantasy and imaginative things
	I tend to believe that things are absolute right or wrong (-)
	I do not handle tasks methodically
	I do not mind breaking rules and conventions
	I tend to favor conventional and traditional views.
	If I have to make decisions I focus mainly on my intuition
	I present work creatively and imaginatively.
I invent and create new things	

HELPER	
	I use my relationships with people to understand and analyze things.
	I like helping people
	I tend to achieve better results in a group of people who work together
	I am a cooperative and supporting person
	I feel confident using feelings, words and ideas to work with people
	I like being close and sharing when I am in a group.
	I am a friendly person and make friends easily.
	It's easy for me to recognize emotional cues to help and solve people's problems.
	I consider myself sensitive to people's moods and feelings
	Usually I tend to focus on people's concerns and feelings.
	I find it difficult to get along with others
	I tend to participate in discussions or discussions to solve problems
	I find easy for me to feel people's emotions
	I avoid coming into contact with people (-)
	I don't pay attention to the feelings of others (-)
	I help and cooperate with others to do homework
	I get involved in tasks and jobs without caring about the money or the benefits that I can get.
	I get involved in group activities more than individual activities
	I think I am a person who try to collaborate to achieve social purposes
I prefer jobs with tasks than those in which I have to deal with people	
It would be easy for me to establish contacts and relationships with other people	
LEADER	
	I enjoy being in charge of a job or project
	I find it easy to influence and persuade people of something I want
	I am a talented person to organize and manage a task
	I feel comfortable when I have power and status in a team.
	I don't mind taking risks when troubleshooting
	I usually use my intuition instead of my knowledge to work.
	I am an energetic and enthusiastic person
	I feel confident in making quick decisions when necessary
	I usually get others to carry out my projects instead of starting them myself.
	I tend to express and defend my thoughts and feelings.
	I use and manipulate others to get my own way
	I love emotion and new experiences.
	I tend to be supported as a leader to defend a reform or initiative.
	I try to be in charge and to lead others
	I often take risks and seek adventure
	I wait for others to take the initiative
	I have difficulty starting challenging tasks
	I work and strive for money or material benefits.
	I would like earn money through business

ORGANIZER	
	I am a very detail-oriented person
	Detailed tasks are easy for me
	I usually follow the instructions of others.
	I tend to be quiet and careful
	I am a responsible person
	I am comfortable performing tasks initiated by others.
	I avoid being in a position of authority
	I feel secure and certain when I follow a routine
	I often complete tasks successfully
	I like things to be orderly
	I feel uncomfortable when things are a mess
	I work hard
	I often forget to put things in their correct place (-)
	I always get the job done and carry out my plans
	I make rash decisions (-)
	I always leave the place a mess
	I feel comfortable with changes and challenges
	I easily waste my time
	I think I am a person who likes a systematic method of work.
	I prefer jobs where I have to follow clear instructions
	I have skills to perform administrative and office jobs
	It would be easy for me to understand and manage income and expenses sheets of a business.
	It would be easy for me to present documentation in official organism.
	I consider myself a practical person
	I consider myself a conscientious person
	I consider myself an accurate person
	I like follow the rules

## Work Environment

MAKER	
	Working outdoors
	Competitive environments: working alone trying to be the best and achieve my goals
	Cooperative environments: working together to achieve common goals
	Structured environments: organized, constant, routine
	Changing and diverse workplaces, not always the same
	Work in quiet and quiet places
	Places with different people and groups
	Work in individual offices or desks
	Work in contact with people
	Working alone
	Work with a fixed schedule
	Work alternate or flexible shifts
	Have my own schedule
	Work from home
	Work outside the home
	Work in noisy spaces
	Work with deadlines and due dates
	Work on projects with no rigid time limit
	Working under pressure
	Work in hierarchical structures: bosses, managers and subordinates
	Work without anyone telling me what to do
	Work in bright and open spaces
	Work in cozy, intimate and limited spaces
	Work in spaces that involve some risk and adventure
	Work in dynamic, changing, fun spaces
	Work in spaces without interruptions
	Work in contact with nature
	Work in very safe spaces that do not endanger our health
	I prefer orderly work environments
	I prefer structured schedules
	I would like my job to allow me to interact with different people
	I would like to carry out my work always in the same city
I would like routine jobs	
I would like to always keep the same co-workers	
In my work, I like to receive clear instructions	

RESEARCHER	
	Working outdoors
	Competitive environments: working alone trying to be the best and achieve my goals
	Cooperative environments: working together to achieve common goals
	Structured environments: organized, constant, routine
	Changing and diverse workplaces, not always the same
	Work in quiet and quiet places
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	I would like to carry out my work always in the same city
I would like routine jobs	
I would like to always keep the same co-workers	
In my work, I like to receive clear instructions	

CREATOR	
	Working outdoors
	Competitive environments: working alone trying to be the best and achieve my goals
	Cooperative environments: working together to achieve common goals
	Structured environments: organized, constant, routine
	Changing and diverse workplaces, not always the same
	Work in quiet and quiet places
	Places with different people and groups
	Work in individual offices or desks
	Work in contact with people
	Working alone
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I would like routine jobs	
I would like to always keep the same co-workers	
In my work, I like to receive clear instructions	

HELPER	
	Working outdoors
	Competitive environments: working alone trying to be the best and achieve my goals
	Cooperative environments: working together to achieve common goals
	Structured environments: organized, constant, routine
	Changing and diverse workplaces, not always the same
	Work in quiet and quiet places
	Places with different people and groups
	Work in individual offices or desks
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	Working alone
	Work with a fixed schedule
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	I would like to carry out my work always in the same city
I would like routine jobs	
I would like to always keep the same co-workers	
In my work, I like to receive clear instructions	

LEADER	
	Working outdoors
	Competitive environments: working alone trying to be the best and achieve my goals
	Cooperative environments: working together to achieve common goals
	Structured environments: organized, constant, routine
	Changing and diverse workplaces, not always the same
	Work in quiet and quiet places
	Places with different people and groups
	Work in individual offices or desks
	Work in contact with people
	Working alone
	Work with a fixed schedule
	Work alternate or flexible shifts
	Have my own schedule
	Work from home
	Work outside the home
	Work in noisy spaces
	Work with deadlines and due dates
	Work on projects with no rigid time limit
	Working under pressure
	Work in hierarchical structures: bosses, managers and subordinates
	Work without anyone telling me what to do
	Work in bright and open spaces
	Work in cozy, intimate and limited spaces
	Work in spaces that involve some risk and adventure
	Work in dynamic, changing, fun spaces
	Work in spaces without interruptions
	Work in contact with nature
	Work in very safe spaces that do not endanger our health
	I prefer orderly work environments
	I prefer structured schedules
	I would like my job to allow me to interact with different people
	I would like to carry out my work always in the same city
I would like routine jobs	
I would like to always keep the same co-workers	
In my work, I like to receive clear instructions	

ORGANIZER	
	Working outdoors
	Competitive environments: working alone trying to be the best and achieve my goals
	Cooperative environments: working together to achieve common goals
	Structured environments: organized, constant, routine
	Changing and diverse workplaces, not always the same
	Work in quiet and quiet places
	Places with different people and groups
	Work in individual offices or desks
	Work in contact with people
	Working alone
	Work with a fixed schedule
	Work alternate or flexible shifts
	Have my own schedule
	Work from home
	Work outside the home
	Work in noisy spaces
	Work with deadlines and due dates
	Work on projects with no rigid time limit
	Working under pressure
	Work in hierarchical structures: bosses, managers and subordinates
	Work without anyone telling me what to do
	Work in bright and open spaces
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I would like routine jobs	
I would like to always keep the same co-workers	
In my work, I like to receive clear instructions	

## Values

MAKER	
	Be realistic in the world
	Have material goods and possessions
	Be efficient and skilled
	Have many skills and abilities to solve everyday problems
	Lead a humble and modest life
	Have family security
	Follow social norms and traditions
	Give and receive favors in your relationships
	Work hard
	Put little time and effort into my work
RESEARCHER	
	Reflect and think about the things that happen around you
	Think and inquire about what happens to you and the why of things
	Be very rigorous in our opinions, affirm what we have evidence of
	Have a good knowledge of the world and its phenomena
	Be smart
	Have the ability to think and analyze things around us
	Spend time studying and researching
	Thinking of new ideas and being creative
	Worry about nature.
	Be well prepared and educated
Have theoretical bases of the life and what happen around us	
CREATOR	
	Express emotions and what you feel
	Believe in something spiritual that goes beyond material things.
	Be religious
	Surround you with surprises
	Find new and different experiences
	Enjoy life
	Have a varied and diverse life
	Get pleasure and satisfaction from things
	Lead an exciting and fun life
	Give yourself satisfaction
	Enjoy things and life to the fullest
	Have fun to the max
	Be creative and imaginative
Have freedom	
Surround yourself with pretty and beautiful things	
Defend reforms and initiatives	

HELPER	
	Help people
	Communicate and talk to people
	Being an understanding person
	Defend human rights
	Take care of the people around you
	Be good friends with your friends
	Cooperate with people
	Treating all people equally, fairly
	Have social justice
	To respect differences and diversity
	To know how to forgive people
	Being an honest person
	To know how to forgive
	Being loyal to my friends
	Listen to people who are different from me and try to understand them.
LEADER	
	Have a lot of money
	Achieve power in work and life
	Choose my own goals
	Have other people admire what you do.
	Being successful in your professional life
	Make my own decisions and do what feels right to me
	Go on new adventures and live an exciting life.
	To earn the respect of others.
	To have social power
	To have social prestige and recognition
	Take risks and challenges
	Reach important positions in companies or organizations
	Undertake risky projects
	Being able to influence people and institutions
	Try challenging goals
	Have ambition
Possess authority over others	

ORGANIZER	
	Live in a safe and secure environment
	Follow and obey the rules even when no one is around
	Have good manners
	Defend that the government is taking care of my safety
	Do everything that people think is right.
	To behave correctly
	Follow and respect traditional values and customs of the family and society
	Accept the life that I have
	Be dedicated to a higher being or leader
	Be humble
	Being thankful
	Respect the rules of coexistence
	Honor parents and elders
	Have self-discipline
	Follow and defend the social order
	Be loyal
	Keep our promises
	I value earning money
	I value saving
I value power in business matters	
I value power in social affairs	

## Appendix B. General Instructions to Content Validity Study

### G-Guidance Questionnaire

Validity content procedure by panel of experts: overview, general description and instructions

#### G-Guidance

##### Gamified Career Guidance:

Promoting Meaningful and Participative Career Construction and Vocational Development through a Gamified Digital Platform

#### 1.-Overview of the theoretical bases of the instrument

According to Holland's Theory of vocational personalities and work environments an occupation is an expression of one's personality. The agreement or congruence between one's personality and one's chosen occupation is positively related to the level of job satisfaction and stability.

The Holland's Theory can be summarized into three assumptions:

- First assumption. Holland believes that people can be categorized according to six personality types (Realistic, Investigative, Artistic, Social, Enterprising and Conventional, known by the acronym RIASEC) that have been considered to define the following types of personality in the G-Guidance Questionnaire:

*Maker* (related to Hollingshead's "Realistic type", R): Likes to work with animals, tools, or machines; generally avoids social activities, such as teaching, healing, and informing others; has good skills in working with tools, mechanical or electrical drawings, machines, or plants and animals; values practical things one can see, touch, and use, such as plants and animals, tools, equipment, or machines; and sees self as practical, mechanical, and realistic.

*Researcher* (related to Hollingshead's "Investigative type", I): Likes to study and solve math or science problems; generally avoids leading, selling, or persuading people; is good at understanding and solving science and math problems; values science; and sees self as precise, scientific, and intellectual.

*Creator* (related to Hollingshead's "Artistic type", A): Likes to do creative activities, such as art, drama, crafts, dance, music, or creative writing; generally avoids highly ordered or repetitive activities; has good artistic abilities in creative writing, drama, crafts, music, or art; values the creative arts and likes drama, music, art, or the works of creative writers; and sees self as expressive, original, and independent.

*Helper* (related to Hollingshead's "Social type", S): Likes to do things to help people, such as teaching, nursing, giving first aid, or providing information; generally avoids using machines, tools, or animals to achieve a goal; is good at teaching, counseling, nursing, or

giving information; values helping people and solving social problems; and sees self as helpful, friendly, and trustworthy.

*Leader* (related to Hollingshead's "Enterprising type"E): Likes to lead and persuade people and to sell things and ideas; is good at leading people and selling things or ideas; values success in politics, leadership, or business; and sees self as energetic, ambitious, and sociable.

*Organizer* (related to Hollingshead's "Conventional type"C): Likes to work with numbers, records, or machines in a set, orderly way; generally avoids ambiguous, unstructured activities; is good at working with written records and numbers in a systematic, orderly way; values success in business; and sees self as orderly and good at following a set plan.

- Second assumption. Each personality type has a different set of abilities, interests, and characteristic personality traits. This set creates an atmosphere and a situation that correspond to each of the personality types, called the work environment. A work environment presents both problems and opportunities, typically dominated by a specific type of personality.
- Third assumption. People will try to find work environments that allow them to use their particular skills, express their attitudes and experience satisfaction.
- Fourth assumption. People will behave as a result of an interaction between the personality of an individual and the characteristics of his environment.

Holland's different personality types have been defined as a result of the combination of skills, preferences, personality traits, values, and work environment. For the content validity process of the G-Guidance Questionnaire we will consider the following general description and definitions of its dimensions and scales.

## **2. General description and aims of the validity content**

The G-Guidance Questionnaire is an instrument developed to evaluate the main dimensions of Holland's theory.

The objective of content validity is to evaluate by different experts the clarity, representativeness and relevance of the items of the G-Guidance Questionnaire. Additionally, the need to review and reformulate the item is requested. To do this, participants must read the brief description of the instrument and the instructions for the procedure. Then, the participants must evaluate each item of each scale that has been included in the different dimensions.

### 3. Dimensions and scales

The instrument is made up of six dimensions: Skills, Activities / interests, Professions, Personality traits, Work environment and Values. Each dimension is divided into six scales according to the six Holland profiles (RIASEC): **M-Maker** (related to Hollingshead's "realistic type", R); **R-Researcher** (related to Hollingshead's "investigative type", I); **C-Creator** (related to Hollingshead's "artistic type", A); **H-Helper/comunicative** (related to Hollingshead's "social type", S); **L-Leader** (related to Hollingshead's "entrepreneurial type" E) ; **O-Organizer** (related to Hollingshead's "Conventional Type" C). Thus, the instrument is finally composed of 36 subscales. Below is the definition of the six dimensions:

#### **Skills**

These refer to particular elements of an individual's personality that allow the execution of tasks and determine the successful development of such a task or activity. They are seen as "the potential associated with the natural characteristics of the individual to manage certain situations (Olaz, 2011, p. 610) and the abilities of the individual to the application of knowledge in order to perform tasks and solve problems through the use of any technique (European Commission, 2009).

#### **Activities/Interests**

Interest refers to relations between the individual and an activity or set of activities in a given area (Krapp, 2002; Schiefele (2009). It includes affective (i.e., feelings that are associated with engagement in an activity) and cognitive components (i.e., the perceived engagement, thoughts about the activity, and attribution of personal significance or importance) which are part of individuals' engagement in activities (Renninger and Hidi 2002).

#### **Professions**

Any type of work or jobs that needs special training or a particular skill and people who this type of work is considered as a group. It is also refers to occupation, calling, business or caree

#### **Personality traits.**

It concerns to individual differences in characteristic patterns of thinking, feeling and behaving. It focuses on relatively stable human psychological characteristics and regularities that make people alike and that distinguish psychologically one person from another. The set of psychological traits influence his or her interactions with, and adaptations to, the intrapsychic, physical, and social environments. Traits are typically seen as stable constructs rather than skills that need to be developed

#### **Work Environment**

It Refers to the dominant characteristic of a job (autonomy, social interaction, mobility...) and the elements of a work environment linked to the basic psychological needs that seem

particularly relevant in the context of activity based work (need for autonomy, need for relatedness, need for structure)

### **Values**

The values are related to the beliefs linked to affection and desirable goals that motivate action and indicate what is important to us in life with varying degrees of importance. Values transcend specific actions and situations, serve as standards or criteria and guide the selection of actions, policies, people, and events; and guides attitudes and behaviors in the context.

## **4. Procedure**

1) Read Holland's assumptions and definition of dimensions.

2) Open the item bank sheet (excel) and rate each item in the following criteria:

- Clarity. Refers to whether the item is correctly formulated and its meaning is understood. The possible answer options are two: No (It is not clear, the item is ambiguous, confusing or does not clearly express what it is trying to evaluate); and Yes (Clear, the item is clear). If the response is NO, please, try to give some suggestion in the columns labeled as "REVIEW/COMMENTS" and "REFORMULATION".

- Representativeness. This criterion refers to whether the item is representative, that is, characteristic or typical of the dimension to which it has been assigned. The possible answer options are three: 1 (low degree of representativeness); 2 (half degree of representativeness); and 3 (high degree of representativeness).

- Relevance. It refers to whether the item is relevant or important to measure the dimension to which it has been assigned. 1 (Not relevant , the item can be eliminated without affecting the dimension measurement); 2 (Not very relevant , the item has some relevance, but it evaluates very secondary aspects of the dimension or are only indirectly related to it); 3 (Relevant , the item reflects important aspects of the dimension evaluated or directly related to it)

Additionally, for each item include your view about the need to review the item or reformulate it (especially if the response in clarity is "NO"), or if other dimension could be more appropriate to include the item:

- Review/comments. Experts should consider, if it is necessary, to review this item regarding its writing or content or if this item should be reassigned to other dimensions. If so, experts should include some comments about the item.

- Reformulation. Experts may propose variations of the item if they consider it appropriate.

- General comments for the global dimension. Finally, include, if you consider it, a general comment on the global dimension, so that the experts can suggest additional elements to consider in the given dimension.

- Once the review is complete, please email the completed excel file to:  
[macarrasco@psi.uned.es](mailto:macarrasco@psi.uned.es)

Don't forget to save the file each time you work with it.

**Thank you very much for your help**





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# G-Guidance

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