CAREERS
AROUND ME
innovative technology
in career guidance

Career e-guidance and tools online

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1 Introduction

Internet has become an important place of our life and an unprecedented channel for obtaining information and communication. The number of people who use it for various reasons is still increasing (Fig. 1) which is changing not only the way people communicate, but also business activities and industries. This is happening in all countries. The increase in use has been 19% in the last nine years in EU countries (13 % in Germany, 14 % in Austria, 21 % in Czechia, 25 % in Italy, 27 % in Spain, 38 % in Romania).

Figure 1: Use of Internet by individuals in EU and partner countries[1]
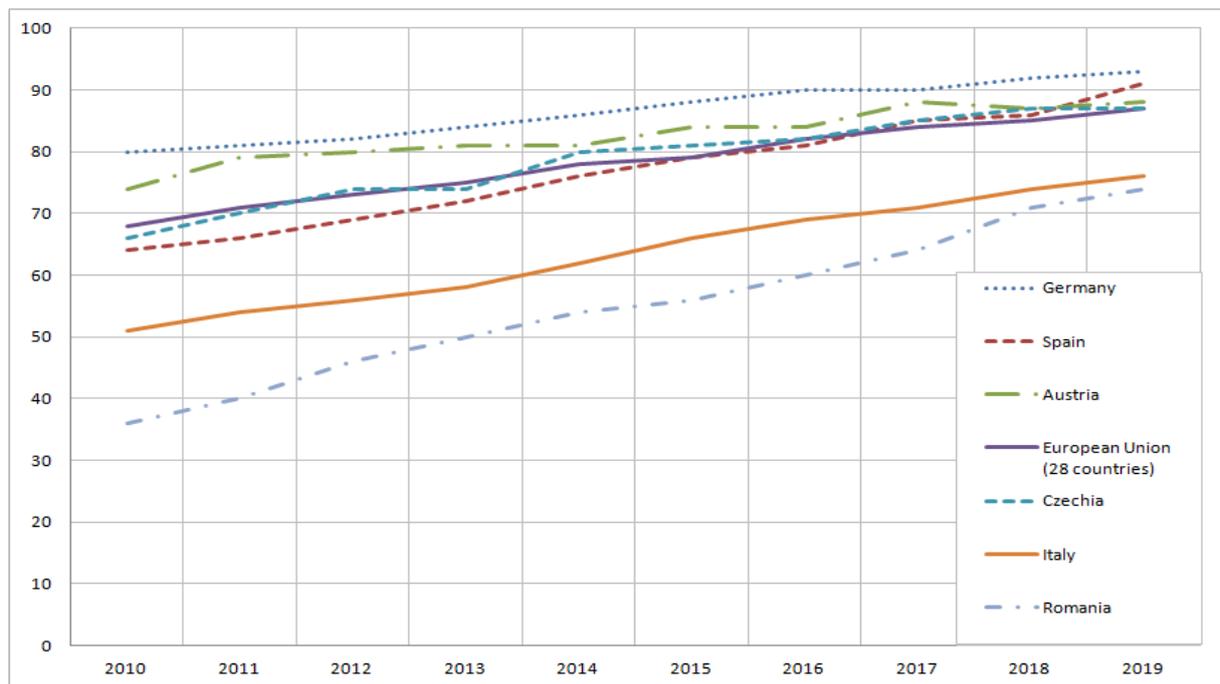
Undoubtedly, career guidance is one of the sectors affected by the development of new technologies. And in all respects. First of all, most of the career guidance information resources are available online. And not just that. Most of career guidance counsellors are also online, and the number of online tools and applications of various professional levels thematically related to or applicable to career guidance is expanding.

The emergence and development of career guidance in the form of online services is very naturally triggered by the transfer of tools and resources for both job search and potential employees to the Internet. Employers quickly learned the benefits of posting job vacancies on the Internet, and job seekers began to take advantage of searching vacancies on internet just as quickly. Logically, career guidance is also following this trend.

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[1]   Eurostat, https://ec.europa.eu/eurostat/ - Individuals - internet use [isoc_ci_ifp_iu]

Not only the whole range of career information can be found on the Internet, i.e. information from the world of work (e.g. job descriptions and requirements, job vacancies, the average wage of individual professions) and education (e.g. overviews of educational opportunities and their providers), but also a number of different tools and applications related to addressing labour market issues. These tools and applications have different focus, professional level, quality of processing, target group, etc. Some tools and applications are freely available, the more elaborated and provided by private entities ones are mostly charged.

Online tools and applications are provided by many different entities, such as public employment services, career and youth centres, trade unions, non-profit organizations, private organizations, educators, but also private individuals. Online tools and applications are generally intended for stand-alone use without specific interaction between the user and the career guidance counsellor. However, there are also online tools and applications that declare that you can communicate online with a career guidance counsellor or that the evaluation of the information entered in the web form or questionnaire is performed on an individual basis by a career guidance counsellor or psychologist.

The content of this study is divided into chapters of 5 chapters. In addition to this introductory chapter, the following two chapters focus on e-guidance, distinguishing between services provided with online career guidance support (Chapter 2) or without it (Chapter 3). A further division of these two chapters is shown in Fig. 2, which is conceived as a typology of e-guidance. The fourth chapter provides several examples of websites that are designed as e-guidance or contain tools that can be classified in this category. The last chapter summarises e-guidance provision and outlines potential of e-guidance as well as how to plan e-guidance activities.

2 E-Guidance

The term E-guidance is defined by the ELGPN Glossary as follows:

„Counselling or guidance that is delivered using ICT and which may or may not directly involves a guidance counsellor. Frequently used to describe the provision of information or the use of self-assessment tools and exercises via the internet." [2]

We work with the concept of career guidance in accordance with the definitions given in the resolutions of the European Council of 2004[3] and 2008.[4] The 2008 Resolution of the Council reaffirmed the definition of lifelong guidance as:

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[2] ELGPN. *Glosary.* Term e-guidance. http://www.elgpn.eu/elgpndb/search/metadata/view/206

"… a continuous process that enables citizens at any age and at any point in their lives to identify their capacities, competences and interests, to make educational, training and occupational decisions, and to manage their individual life paths in learning, work and other settings in which those capacities and competences are learned and/or used. Guidance covers a range of individual and collective activities relating to information- giving, counselling, competence assessment, support, and the teaching of decision-making and career management skills" (2008, p. 2).

The desk research revealed the structure of the individual components of e-guidance shown in Figure 2. First of all, we distinguish whether the provision of online career guidance is backing online by one or team of career guidance counsellors (chapter 2.1) or is provided without their support (chapter 2.2).

Figure 2: E-guidance basic typology
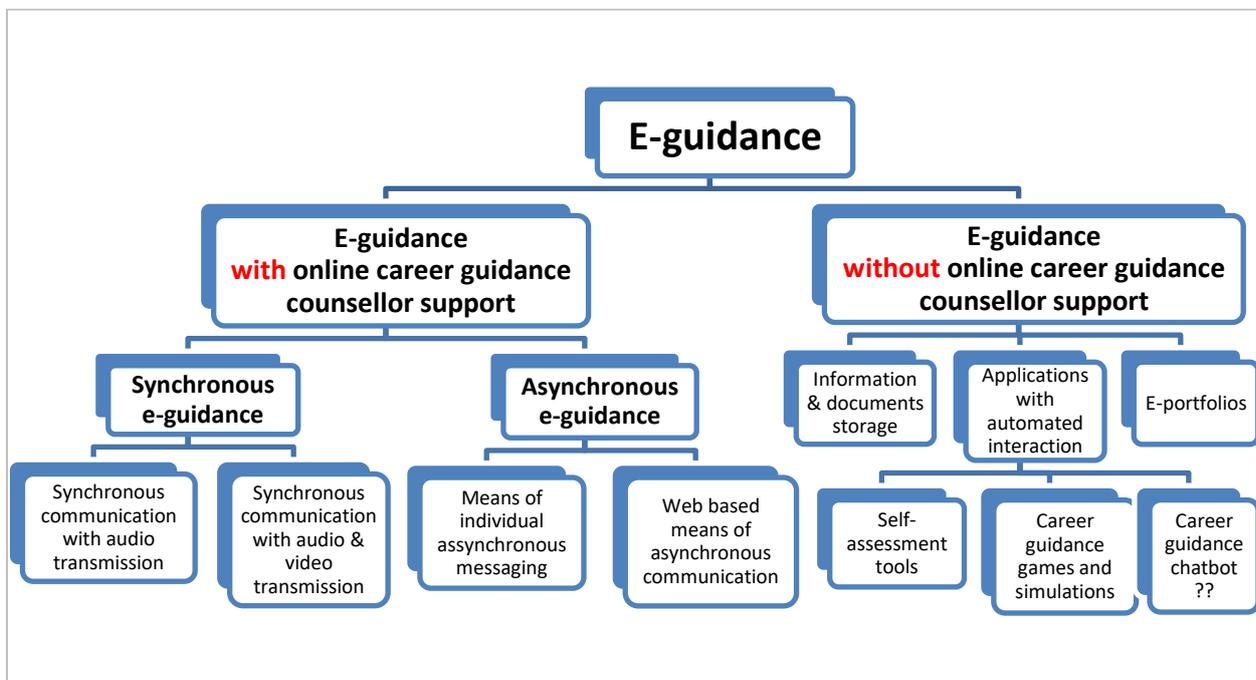
We then distinguish e-guidance with the online support of a career counsellor according to the course in time into synchronous (chapter 2.1.1) and asynchronous (chapter 2.1.2). Explanation of these two online ways of providing career guidance is given below, including

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3   Resolution of the European Union (2004). Council resolution on Strengthening Policies, Systems and Practices in the field of Guidance throughout life in Europe. https://www.cedefop.europa.eu/files/954-att1-1-Council_Resolution_on_Guidance_280504-EN.pdf

4   Council of the European Union (2008). *Council resolution on better integrating lifelong guidance into lifelong learning strategies.* 2905th Education, Youth and Culture Council meeting Brussels, 21 November. http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/educ/104236.pdf

their further breakdown. In e-guidance without online career guidance counsellor's support are differentiated resources and tools according to their interactivity (chapter 2.2).

2.1   E-guidance with online career guidance counsellor's support

Basic element of the e-guidance with online career guidance counsellor's support is direct communication between the counsellor and the client. Their communication can take place via various ICT. Depending on whether the communication between the client and the career guidance counsellor takes place via information and communication technology (ICT) **in real time** or with a **certain delay**, a distinction is made between asynchronous and synchronous e-guidance.[5]

2.1.1 Synchronous e-guidance with online career guidance counsellor's support

The term synchronous e-guidance refers to direct communication between the counsellor and the client, which takes place via ICT in real time, and is provided mainly by ICT means that transmit audio and video (telephone, web applications enabling online calls).

The main advantages of synchronous career services include:
- Time and geographic availability which reduces time and money for travel.
- Both the client and career guidance counsellor can participate in a familiar environment in which an intimate and secure atmosphere is better created.
- Reducing the financial demands of the service provided.
- At the time of the epidemic, the risk of infection is greatly reduced.

Synchronous career services negatively affect:
- Occasional internet connection problems and outages.
- The possibility of disrupting the conversation with the external environment, which cannot be prevented even in the counsellor's office. However, if the client and the counsellor are not in the same room, the possibility of disruption is doubled.

2.1.1.1   Synchronous communication using only audio transmission

Telephone conversations are a major example of synchronous communication with audio transmission.

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[5]   VENABLE, M. A. (2010) *Using Technology to Deliver Career Development Services: Supporting Today's Students in Higher Education.* https://onlinelibrary.wiley.com/doi/abs/10.1002/j.2161-0045.2010.tb00132.x

2.1.1.2 Synchronous communication using audio and video transmission

A great competitor to classic telephone calls is provided by web applications for online meetings, which enable not only audio transmission also audio & video transmission. A necessary condition is that each of participants has an electronic device (PC, mobile phone, tablet, notebook) with access to internet, web browser (like Internet Explorer or Firefox), and for registration an email address.

Several examples of applications for online meetings in alphabetic order:[6], [7]
- BigBlueButton, https://bigbluebutton.org/
- Blizz, https://www.blizz.com/
- Bluejeans Meetings, https://www.bluejeans.com/
- Cisco Webex, https://www.webex.com/
- ClickMeeting, https://clickmeeting.com/
- Easymeeting, https://www.easymeeting.net/
- ezTalks, https://www.eztalks.com/meetings
- Google Meet, https://meet.google.com/
- GoToMeeting, https://www.gotomeeting.com/
- Join.me, https://www.join.me/
- Lifesize, https://www.lifesize.com/
- MegaMeeting, https://www.megameeting.com/
- Microsoft Teams, https://www.microsoft.com/en-US/microsoft-365/microsoft-teams/group-chat-software
- ProfiConf, https://proficonf.com/
- RingCentral Video, https://www.ringcentral.com/online-meetings/overview.html
- Skype Meet Now, https://www.skype.com/en/free-conference-call/
- Skype, https://www.skype.com/
- U Meeting, http://www.umeeting.com/
- Videosign.co, https://www.videosign.co/
- WebRoom, https://webroom.net/
- Whereby, https://whereby.com/
- Zoom Meetings, https://zoom.us/

The advantage of these web applications is the ability to establish personal contact, create a secure environment for a guidance interview, and especially remove the geographical barrier, and time and save money for travelling. It is an exaggeration to say that a client can ask for a consultant from the other side of the world and have with him/her personal contact without travelling.

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[6]   Top free video conferencing software. https://www.g2.com/categories/video-conferencing

[7]   DRAKE, B., TURNER. B. (2020) *Best video conferencing software in 2020.*
      https://www.techradar.com/best/best-video-conferencing-software

Most applications allow online meetings of more people, so it is possible to use online meetings with multiple clients or several guidance counsellors with multiple clients. Web applications can also be effectively used for supervision or training.

The basics service is free of charge and the paid versions usually offer more possibilities like schedule sessions, recording, voting, file sharing etc.

2.1.2 Asynchronous e-guidance with online career guidance support

The term asynchronous e-guidance refers to communication between the career guidance counsellor and the client that takes place via ICT outside real time, i.e. there is a certain time lag between the time of contact (e.g. asking a question by the client) and responding to that contact (e.g. sending a response to the client).

Advantages of asynchronous career services:
- The client can send his request / question at any time.
- The query formulation stimulates the client to clarification of the request / question.
- The counsellor has more time to think about the answer, to find the necessary information sources, or to consult the problem with another counsellor or expert in the field of client's request.

However, asynchronous career services also have their negatives:
- There may be a time lag between the question and the answer, during which the client ceases to be interested in the service.
- The counsellor must carefully and understandably formulate the answer, and be very correct.
- The interaction between the client and the counsellor is limited to written form (due to lack of body language and other non-verbal forms of communication).
- It should be complicated to clarify a client's request if the counsellor does not fully understand it.

2.1.2.1 Means of individual asynchronous communication

Most career guidance providers publish on their web pages an e-mail address where potential clients can send their requests. The career guidance provider can use standard e-mail software (e.g. MS Outlook, Mozilla Thunderbird, Windows Live Mail, eM Client) or "tailor-made" e-mail software equipped with support functions that collect information about clients and activity of career guidance counsellors, and allow their analysis. An

example is E-guidance management software (Fig. 3), which was developed in the UK by Graduate Prospects Ltd. for the needs of university counselling centres.[8]

Quite seldom are probably for individual communication used text messages SMS via mobile devices unless the career guidance counsellor does not care to give clients personal mobile phone number nor has business mobile.

Figure 3: Prospects.ac.uk. Database of careers queries awaiting reply
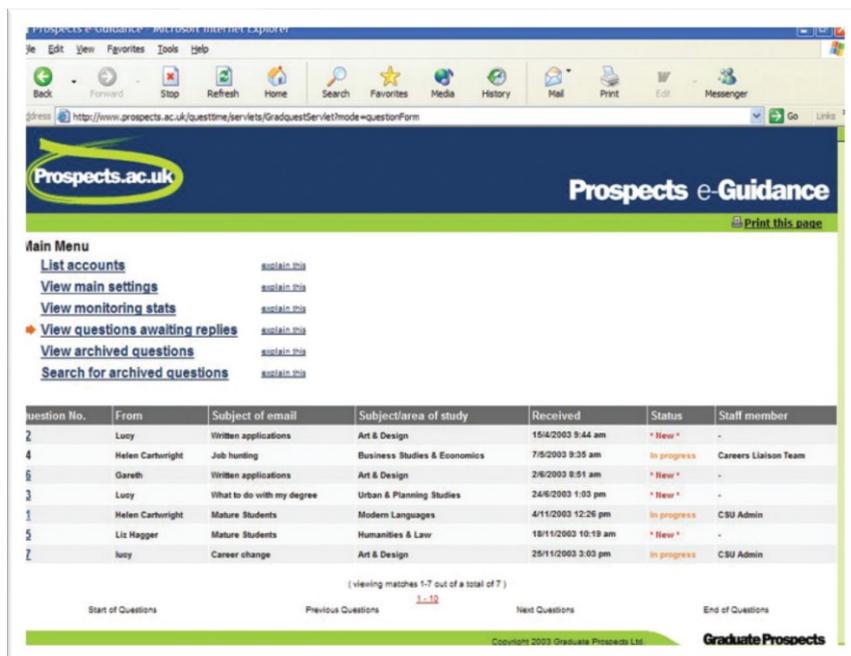
2.1.2.2 Web based means of asynchronous communication

Common form of communication between clients and career guidance counsellors is communication through online tools and applications, including contact forms, self-assessment tools and applications with online career guidance counsellor support,…

2.1.2.2.1 Contact forms
Contact forms are intended for asking questions to a career guidance counsellor or for ordering meeting with the counsellor.

2.1.2.2.2 Self-assessment tools and applications
Some career guidance providers have various self-assessment tools and applications on their websites (e.g. in the form of an interest questionnaire, career guidance, study prerequisites, career choices, etc.). Some of them declare that their processing is not automated and performed by an experienced psychologist. Evaluation of these tests is usually charged.

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[8]   MADABAR, L., OFFER, M. (2004) *Managing e-guidance interventions within HE careers services: a new approach to providing guidance at a distance*. Higher Education Careers Services Unit (HECSU) and Graduate Prospects LtD.
https://hecsu.ac.uk/assets/assets/documents/EGUIDANCE_RESEARCH_REPORT.pdf

2.1.2.2.3 Section for questions and answers, FAQ, blogs

The effectiveness of providing career guidance can be increased by setting up a web section to collect questions and publish answers. Clients can insert their requests / questions into a form on the website or send them by e-mail. The advantage is that information intended for individual users can also be useful for other users with the same needs.

2.1.2.2.4 Social networks

Whether social networks can be included in e-guidance is a question that would need deeper insight. They could act as e-guidance if they are shown to interact between a career guidance counsellor and a client.

In general, social networks are a useful tool for career guidance clients, career guidance counsellors and organizations that provide career guidance. They can be used for education, personal and career development, finding a job or starting your own business, watching what is new in the field, using communities and building a network of contacts useful for a career (Fig. 4). The most popular are the following social networks:[9]

- Facebook, www.facebook.com
- Instagram, https://www.instagram.com/
- Twitter, www.twitter.com
- LinkedIn, www.LinkedIn.com
- Xing, www.Xing.com
- Viadeo, www.Viadeo.com

Figure 4: Social networks & careers[10]
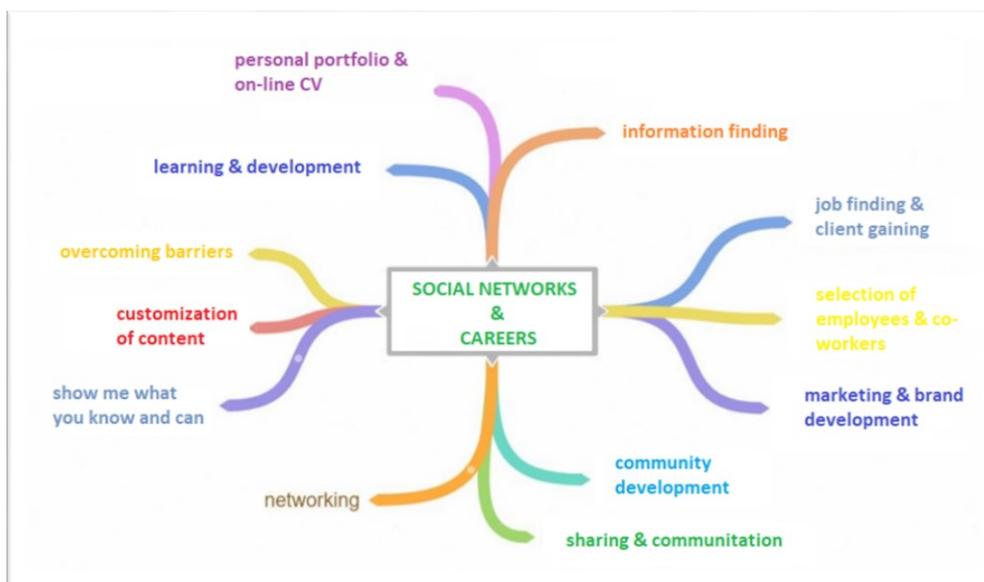
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[9]   RAKOVSKA, N. (2012) *Manual for delivering career guidance using websites*. Project ERASMUS+ WBS. Business Foundation for Education. Sofia.

[10] VÁCLAVÍKOVÁ, L. (2018) *Využití sociálních sítí v kariérovém poradenství.* (Use of the social network in career guidance) https://www.slideshare.net/lucievaclavkova921/socialni-site-v-karierovem-poradenstvi

2.1.2.2.5 E-learning courses focussed on CMS development

The aim of these courses is usually to strengthen clients' CMS, prepare them for the transition to the labour market and support them in taking responsibility for their own career path and career development.

2.2 E-guidance without online career guidance counsellor's support

The most common forms of e-guidance without direct career guidance counsellor support are various online tools and applications freely available on the Internet. They includes in particular provision of information about the world of work and education, and applications that serve the clients to collect and save in electronic form a wide range of documents related to career and education and serve as a repository for career decision making. They are also called **E-portfolios.**

Some of career guidance providers have at their web pages online tools and applications that enable automatic interaction with clients. This group of applications include:
- Self-assessment tools
- Career guidance games and simulations
- And probably in near future also some career guidance chatbots?

2.2.1 Disclosure of information & documents from the world of work and education

Many career guidance providers publish on their web pages a variety of free-to-use information materials online for free use. These are mainly informative brochures and leaflets possibly on services provided and various instructions (e.g. how to present yourself to the employer, how to compile a CV, how to style a cover letter, where to look for information on job vacancies or further education, etc.). Selected information can be found on the European Commission's portal, e.g. EURES,[11] Europass,[12] or Eurostat.[13]

2.2.2 E-portfolio

The application called e-portfolio allows users to collect various electronic evidence of their knowledge, skills, results from all forms of education and employment, as well as acquired in leisure activities. It can also contain various self-assessment tools. The user can usually decide who to view and which files, and a resume can be easily generated from the information entered.

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[11]   EURES, https://ec.europa.eu/eures/

[12]   Europass, https://europa.eu/europass/

[13]   Eurostat, https://ec.europa.eu/eurostat/

2.2.3 Applications with automated interaction

Career guidance providers are increasingly using applications on their websites that enable automatic interaction with their clients. In this group of applications also belong games and simulations supporting career orientation and decision-making, the aim of which may be, for example, to examine the level of the CMS and alert the client to selected skills that he lacks or uses little from the CMS. These technologies support user control and self-sufficiency, but can also automate some of the more routine aspects of the counselling process.

2.2.3.1 Self-assessment tools and applications without online career guidance counsellor's support

Portals offering self-assessment tools for identifying interests, assumptions and other personal characteristics of various levels and processing appear quite abundantly on the Internet. Evaluation of these tests is automated and may incur charges.

Self-assessment questionnaires have different orientations, are based on different theoretical foundations and only a few of them are officially standardized. Favourites include self-assessment tests of personal and social competencies, professional interests and prerequisites, etc.

The theoretical basis on which these questionnaires were based is generally not given for these questionnaires. For those who give a theoretical basis, the most widely used theory is Holland's theory using the RIASEC codes. Some questionnaires can be filled in free of charge, but obtaining the result of the questionnaire is charged.

The disadvantage of these tests is that they measure only a limited number of general skills and no test is accurate enough to be able to predict with certainty the final success of an individual in the labour market. [14]

2.2.3.2 Online career guidance games and simulations

Most career guidance games are designed for children and young people. However, online games are also played by adults, and they would certainly like to learn something in a fun way while playing about their preconditions for performing a certain profession or about the requirements for performing a certain profession. In games of this type, there is a requirement to reconcile the ratio of entertainment and gaining practical information, which is to guarantee that the user will have enough fun while obtaining an adequate body of new information about the labour market and his professional orientation. Recently on internet available online career guidance games that have a different focus, different levels of

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[14]   VENDEL, Š. (2008) *Kariérní poradenství.* (Career guidance) Grada. Praha

processing, different technological base, etc. The following predominant types of games have been identified from desk research.

2.2.3.2.1 Career guidance games

In the category of career guidance games, we include games mainly that take place in a non-specific environment, and lead users to learn about the labour market and other areas of human life.

Examples of games:
- The Real Game, Canada, charged, https://www.realgame.com/
- Jobs that care, United Kingdom, free of charge, http://www.jobsthatcare.co.uk/
- Career Quest, USA, free of charge, http://j.whyville.net/smmk/fortune/outside

2.2.3.2.2 Career guidance games in a city

The main elements of these career guidance games include, in particular, an interactive city map. Through various activities in the city, such as construction or just discovering city buildings, the user is introduced to various aspects of certain number of occupations.

Examples of games:
- Mapa Karier, Poland, Free of charge, https://mapakarier.org/city
- Career Locker, USA, Charged, https://careerlocker.wisc.edu/Products/Elementary
- Paws in Jobland, Canada, Charged, https://www.xap.com/paws/

2.2.3.2.3 Games to plan future career based on living costs

The aim of these games is to enable users to assess the financial situation of selected professions. The games are equipped with a database of occupations, including their average salaries. After choosing a profession, the system asks for an idea of the cost of living (accommodation, food, transport, education, etc.). Games make users realize the need to make money on everything they expect from life.

Examples of games:
- Claim your future, USA, free of charge, https://fame.claimyourfuture.com/
- Můj život po škole – My life after school, Czech Republic, free of charge, https://www.mujzivotposkole.cz/
- JA Plan your future, USA, free of charge, http://educgames.ja.org/economics/
- JA Build your future, USA, free of charge, https://www.juniorachievement.org/s3/apps/ja-byf/#/career

2.2.3.2.4 Strategic and development games

Although these games are not primarily focused on career guidance, they have certain elements and economic models potentially inspiring for career guidance. They lead users to think about the occupations needed for the full function of the city they are building, and also to make people want to live in that city.

Examples of games:
- SimCity, USA, charged, https://www.ea.com/cs-cz/games/simcity
- Venture Towns, USA, charged, https://www.nintendo.com/games/detail/venture-towns-switch/

2.2.3.3 Career guidance chatbots?

And the future? We may see in near future that instead of a career counsellor, a chatbot machine will communicate with the client online in real time.

3 E-guidance implementation

There is no universal guide on how to implement ICT in career guidance process. In this chapter, the possible course of the introduction of ICT into the website of the career guidance provider is outlined. In many ways, it really only outlines what needs to be done. The model presented here contains 15 steps divided into 5 phases (Fig. 5). Each step in the introduction contains a question to which the step seeks answers.

The first phase is called "PLAN" and its first step is to research the available resources, the target group and their needs. For simplicity, there is also a list of various tools, instruments, applications, etc., which are called "elements of e-guidance". The second step is to create an e-guidance portal concept. The third step is to introduce the e-guidance concept to career guidance provider staff and key stakeholders who have the opportunity to influence the concept. The fourth step is to carry out a detailed readiness assessment of the current situation of institutional websites, e-guidance elements, staff and ICT readiness.

The second phase "DESIGN" in its first step compiles a specific e-guidance project and, if necessary, a proposal for changes to the institutional website. The third step is very important because it estimates e-guidance project costs and can to a large extent affect the possibilities of the proposed ICT implementation.

In the third phase "PRODUCTION" and its first step an e-guidance project is implemented. In the second, staff is prepared for tasks related to e-guidance, and in the third step, the finished elements of e-guidance are pilot tested.

The fourth phase "DEPLOY" puts in the first step the already prepared elements of e-guidance into operation. The second step promotes the e-guidance to existing and potential clients.

In the fifth phase "REVIEW & IMPROVE", in the first step, regular monitoring and evaluation of quality, data on the use of e-guidance and feedback questionnaires takes place, the findings of which are implemented in the second step for e-guidance and institutional websites improvements and innovations. [15]

Figure 5: Five phases of e-guidance implementation[16]

3.1 Phase 1: Plan

3.1.1 Step 1: Research

How other e-guidance portals are conceived?

Learning how other e-guidance portals (private, public, international) are implemented is an essential 1st step. Examining the internet and available e-guidance elements will help to get an idea of the possibilities, ways and form of using ICT in career guidance, about the methods and tools that can be offered to clients online, as well as about the possible communication ways with clients.

Examples of e-guidance elements:
- Self-assessment tools
    o with support of a career guidance psychologist: psychological standardised tests

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[15]   Department of Education. Government of Western Australia. (2009) *Steps to implementing ICT enriched classrooms.* http://det.wa.edu.au/intranet/podprogram/detcms/cms-service/download/asset/?asset_id=15680571

[16]   Ibid, adjusted.

- o with support of a specifically trained career guidance counsellor: standardised tests that can be used by non-psychologist, but the counsellor has to be trained in their administration and assessment
  - o with support of a career guidance counsellor: non-standardised tests that can be used by non-psychologist, and the counsellor has not to be trained in their administration and assessment
  - o without support
- Other tools
  - o e-portfolio
  - o e-CV builder
  - o e-learning focussed on career management skills
  - o online career guidance games
  - o job matching engine
- Information provision
  - o educational offer on national, regional, local, institutional levels
  - o labour market situation, jobs and salaries
  - o signposts of other information sources
- Online training / sessions for clients
  - o short / long
  - o carried out once / divided into several parts
- Communication channels with career guidance provider
  - o online career guidance counsellor
  - o e-mail
  - o chat rooms
  - o e-conferencing
  - o blogs
- Analytical tool for gathering information about e-guidance visitors and their behaviour
- Feedback questionnaire designed for the collecting clients' opinions on the website and its individual parts
- Articles on career development and entrepreneurship

Part of the research is also to clarify your own target group, for which e-guidance is intended and their needs. It is advisable to research not only web portals designed for the intended target group, but all available resources, and draw inspiration from home as well as from abroad.

Research results into an overview of examples of good practice, from which can be draw inspiration for creating new e-guidance portal concept, regardless of the existing possibilities. Research may also reveal a challenging insufficient supply of some e-guidance elements in the supply of other providers.

3.1.2　Step 2: Clarify of e-guidance portal concept

What is the e-guidance portal concept?

The results of the research will help in formulating the e-guidance portal construction concept including both the objectives of the portal, the considered functions and elements suitable for the selected target group. The creation of the portal's concept is influenced by fundamental factors, such as the mission of the career guidance provider, skills, knowledge, and capacity of the staff, as well as the predominant target group of clients. Vice versa, e-guidance can influence the career guidance provider mission.

3.1.3　Step 3: Engage staff and main stakeholders

Who are our stakeholders?

Creating an e-guidance portal can affect the career guidance provision. The extent to which this could happen depends mainly on the chosen online services, their share of currently provided career guidance, need for online communication with clients, as well as on needed staff training. Therefore, before starting e-guidance concept preparation the career guidance provider has to be sure that main stakeholders and own staff understand and agree with changes accompanying implementation of e-guidance. The more support for introduction of online services you will have from your own staff and stakeholders, the easier it will be to implement it.

3.1.4　Step 4: Conduct a detailed readiness assessment

What is current situation?

The evaluation of the current situation is the starting point for making a change and introducing ICT into the provision of career guidance.[17] Assessment of current situation shall give an overview of:
- tools, instruments, applications, games, resources etc. that are ready to be used online,
- tools, instruments, applications, games, resources etc. that can be after their adjustment ready to be used online,

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[17] There are two circuits of ICT implementation into career guidance provision:

- Management and administration of the service (operation, finance, HRD, record keeping, quality assessment …)

- Online career guidance service for clients = e-guidance.

The operation of e-guidance is not conditioned by the use of ICT in management and administrative activities. It is possible to consider a career guidance provider who does not use ICT or uses it only to a small extent in its management and administrative activities, nevertheless implements quality e-guidance. In this paper we do not deal with implementation of ICT in management and administration into the career guidance services.

- staff skills in online career guidance, in using ICT, assessment methods in career guidance etc.,
- institutional web pages, ICT and infrastructure.

Conducting this assessment will provide a structure you can use to form the basis for your ongoing e-guidance project.

3.2   Phase 2: Design

3.2.1 Step 5: Develop the e-guidance project

What we want achieve in e-guidance and when?

Decide which kind of the e-guidance portal will be made (see Figu. 2, page 11) and which of the e-guidance elements could contain. It is also worth considering how much of online support your staffs is able and willing to offer your clients (Fig. 6), whether your staff has adequate knowledge and skills to prepare quality e-guidance elements, etc.

Figure 6: Example of interaction between the client and the e-counsellor
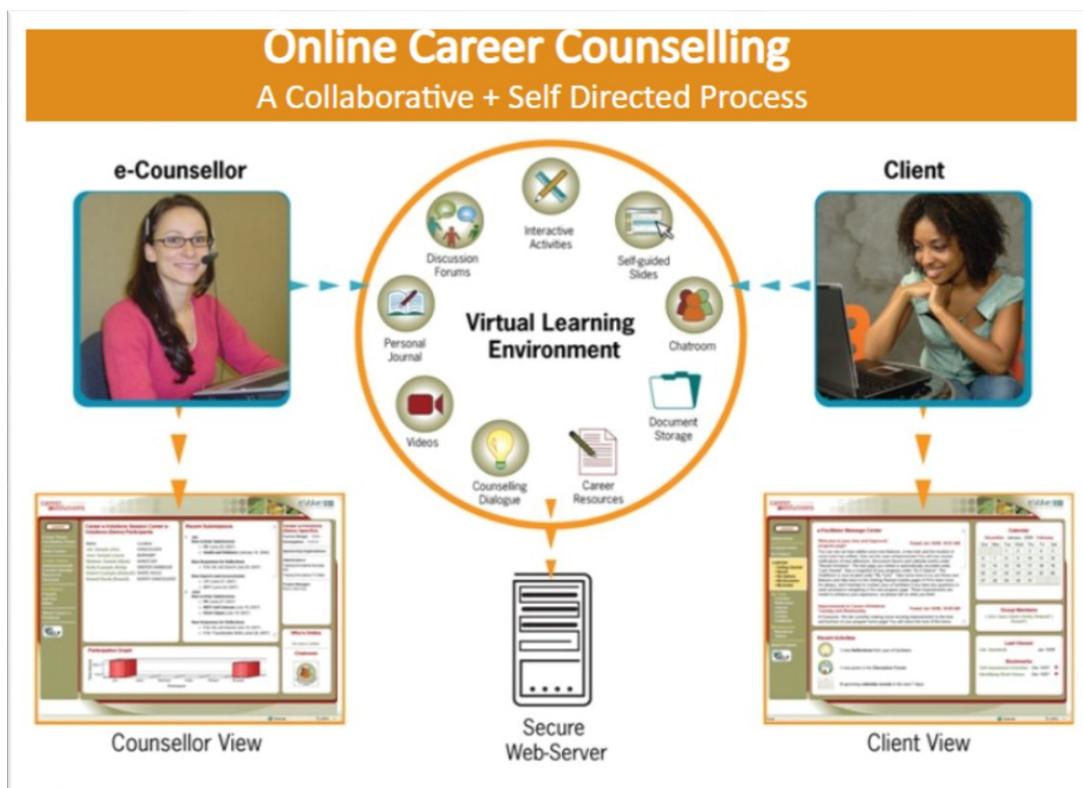
Determine and briefly describe the individual steps to achieve the resulting e-guidance portal. Divide the individual steps into time periods (month, half a year, year) as not all e-guidance elements need to be ready to use at the same time.

If relevant appoint the e-guidance project leader and members of its team. Let the team review the e-guidance project steps, and workout them to milestones. One member of the e-guidance team should be expert in ICT and e-learning. Suggestions for improvement can result from discussions of the final project with internal staff, external career guidance counsellors and the ICT expert.

3.2.2 Step 6: Consider changes of institutional web pages

How e-guidance fits into the existing institutional web pages?

Let the e-guidance team assess institutional web pages and make suggestions how to incorporate new e-guidance elements into them and/or how to improve existing institutional web pages or to prepare new ones. If available, the number of visitors and their behaviour on existing websites should also be evaluated. Steps have to been taken to attract new visitors and not discourage returning ones.

3.2.3 Step 7: Prepare a detailed budget

What are the e-guidance project costs and how they will be covered?

Probably no single checklist can capture the possible costs of building e-guidance portal. The general categories of future spending can be in the following categories:
- hardware
- software
- ongoing technical support and management
- staff training
- staffing
- system maintenance and upgrades.

3.3 Phase 3: Produce

3.3.1 Step 8: Prepare the individual e-guidance elements

Who will prepare what and when?

Elements of e-guidance (tools, instruments, information and other resources) should meet specific quality standards. Therefore, it is recommended to contact professional companies and purchase standardized tools rather than laically produce them. When buying, it is possible to contact more companies and compare their offer content and price.

Do not forget the analytical tool that will be measuring number of visitors and their behaviours.

3.3.2 Step 9: Align staff with e-guidance

How can be prepared staff?

Mainly for elements requiring online support it is essential to acquaint employees with the concept of e-guidance and with the role of everyone in it. In any case, a good match of e-guidance elements with employees is essential to help employees stay focused and maximize benefits both for the career guidance providers and their clients. Reconciling employees is not only a critical factor in the overall success of e-guidance, but also the personal success of each employee and their involvement in the company. For the role with individual e-guidance elements shall the staff be trained before its pilot testing.

Among the main competencies that have to have career e-guidance counsellors are:[18]

- knowledge of computer-assisted software and web sites
- capability to diagnose client needs
- capability to motivate clients
- capability to help clients process data
- capability to help the client create and implement an action plan.

3.3.3 Step 10: Pilot test the individual e-guidance elements

How to know that the e-guidance works?

It is recommended to test everything properly before putting it into operation and making it available to the public. To know if the e-guidance works one or more external career guidance experts can be asked to review both the institutional web pages and the e-guidance in terms of content, coherence, continuity, setting of communication channels and their functionality, etc. Their comments and recommendation can be internally discussed and the web pages adjusted accordingly.

3.4 Phase 4: Deploy

3.4.1 Step 12: Start of operation

How to start E-guidance operation – all at once or gradually?

Carefully consider the timing of the start of e-guidance operation. It is not necessary to put everything into operation at once. However, it is important that you are convinced of the quality of the processing of the elements that you commission.

3.4.2 Step 13: Promote your new service

How to let know the clients about new service?

The principles of marketing can be used to promote not only e-guidance but whole services provided. This requires that services reflect the career development needs of the population

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[18]   SAMPSON, J.P. (2013) Strategies for blending ICT and counseling in fostering informed career decision making. https://slideplayer.com/slide/6045598/

served (people), that services are clearly defined (product) and accessible (price and location) and that clients fully understand the services offered (promotion).[19]

3.5 Phase 5: Review & improve

3.5.1 Step 14: Evaluate quality regularly

How to know that e-guidance works and meets standard quality?
Establish a review group to oversee e-guidance progress and resolve its problems. Accept there are still some e-guidance elements that can be adjusted, added or replaced. Also, be sure to note and acknowledge your successes. E-guidance can fundamentally change the overall career guidance provision especially in attracting more clients both in personal and online contacts, as well as in the breadth of issues with which they will turn for help.

Monitor and continuously evaluate the data collected by the analytical tool built into the website as well as by the client's feedback questionnaire, and adjust the content of the website according to the number of visitors and their behaviour.

3.5.2 Step 15: Innovate and adjust

What source for innovations we can use?
Valuable resource of ideas for innovation is your staff and regular evaluations of institutional website quality, including e-guidance. Quantitative data
As in the beginning, it's a good idea to check from time to time how other e-guidance portals are evolving, what e-guidance elements they've added, what's new, and get inspired for further editing.

4   Examples of e-guidance with the CMS topic

In this chapter, we present an overview of the findings on e-guidance focused on CMS. The overview is by no means comprehensive. No summary was found for the group of tools and applications defined in this way, and it was really very difficult to find them. Especially recently, new ones have appeared and, on the contrary, some older ones, even if they have been proven, are disappearing for various reasons. It can be assumed that one of the reasons for the disappearance of career guidance tools and applications may be the need to innovate them for new versions of web browsers and probably also measures related to GDPR.

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[19]   HOPKINS, S. (1998) *Marketing Career Counseling Services: ERIC Digest*. https://www.ericdigests.org/1998-2/marketing.htm

Searching for e-guidance websites with the CMS topic was quite difficult. However, some examples were found. They are listed under each country. If an EU country is missing from the list, it does not mean that it does not have an e-guidance website. This means that we were unable to locate this site. In addition to our own internet search, CEDEFOP publications were used (Tab. 1).[20] [21]

Table 1: CEDEFOP Handbook of ICT practices for guidance and career development: List of web portal with CMS in statement of their policy objectives

Portal	Country	Web pages
bib-wiki platform for continuous education counsellors	AT	http://bibwiki.at
Online tools of BiWi	AT	https://www.wko.at/site/Biwi/BiWi-Berufsinformationszentrum-der-Wiener-Wirtschaft.html
Education choice tool - Onderwijskiezer	BE	https://www.onderwijskiezer.be
Occupation development navigator	DE	https://ben.arbeitsagentur.de
eGuidance service	DK	https://www.ug.dk/evejledning
Pathfinder service	EE	https://rajaleidja.innove.ee
EURES	EU	https://ec.europa.eu/eures
Europass	EU	http://europass.cedefop.europa.eu
Kyvyt.fi	FI	https://kyvyt.fi
Teens gate	GR	http://www.eoppep.gr/teens/
CareersPortal.ie	IE	https://careersportal.ie/
ePortfolio	IT	https://www.eportfoliobilco.it
Anelo.lu	LU	https://www.anelo.lu
Career portal of State Employment Agency	LV	http://www.nva.gov.lv
Professions in the picture	NL	https://www.beroepeninbeeld.nl
Work profiler	NL	http://www.werk.nl/
Vi@s	PT	https://vias.iefp.pt
Education info - Utbildinings	SE	http://www.utbildningsinfo.se
Employment service	SE	https://www.arbetsformedlingen.se
KomposyT	SK	https://www.komposyt.sk/
Labour market internet guide - ISTP	SK	https://www.istp.sk
LMI for ALL	UK	http://www.lmiforall.org.uk
National careers services	UK	https://nationalcareersservice.direct.gov.uk

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[20] CEDEFOP (2011) *Lifelong guidance across Europe: reviewing policy progress and future prospects.* Luxembourg: Publications Office. https://www.cedefop.europa.eu/en/publications-and-resources/publications/6111

[21] CEDEFOP (2018) *Handbook of ICT practices for guidance and career development*. Luxembourg: Publications Office. https://www.cedefop.europa.eu/files/4164_en.pdf

4.1   Denmark, Educational guide

Web pages: https://www.ug.dk/evejledning
Description: Educational guide. Comprehensive information service on the labour
                     market and the offer of education
Language: DK
E-guidance: both synchronous and asynchronous

Danish Educational guide provides comprehensive information on the labour market and education. Clients can contact the service by contact form, phone, mail, and they can also use digital meetings (Fig. 7). E-guidance service works on the basis of a 4K model (Fig. 8) that has four stages of work between the client and the career guidance counsellor:

- **Contact**: establishing contact with the client. The counsellor "actively" listens, linguistically mirrors the client and gives room for reflection.
- **Contract**: the contract expresses the agreed expectations of the client (order). The contract is continuously updated according to the needs and situation of the client.
- **Communication**: career guidance counsellor continuously makes sure that he is on the same boat with the client.
- **Conclusion**: the counsellor with the client will make sure that the counselling process has helped the client in orientation and that the client has enough information to make career decision.
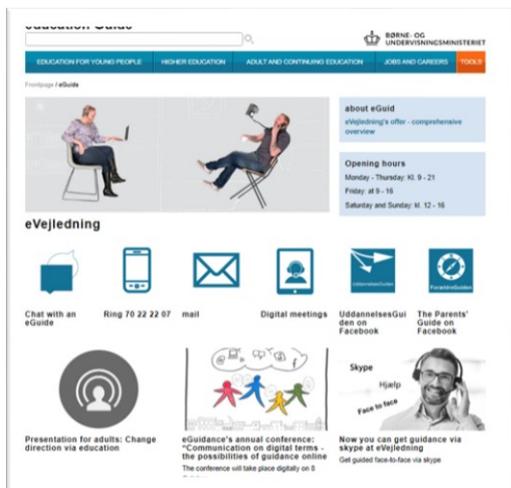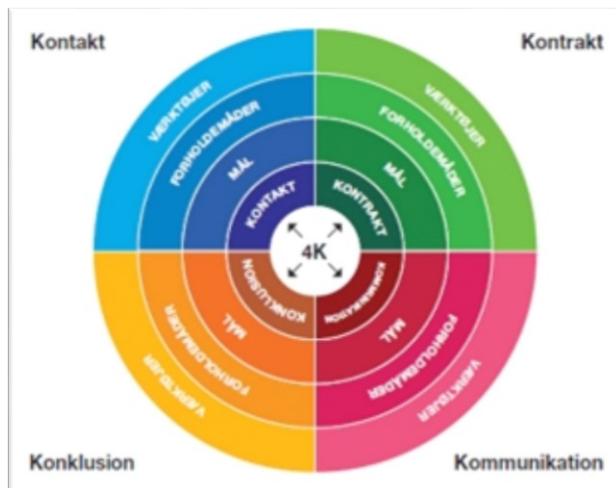
Figure 7: Danish Educational guide

Figure 8: „4K" model E-guidance

4.2   United Kingdom, Birmingham City University

Web pages: https://www.bcu.ac.uk/alumni/finding-work/access-our-service/e-guidance-and-chat-live

Description: Website of Birmingham City University

Language: EN

E-guidance: asynchronous

University students and members of the Alumni Club Client can communicate with the counsellor via inquiry form at any time. Electronic documents can also be sent via the online form (Fig. 9). The same service is provided by other universities in the United Kingdom.

Figure 9: E-guidance provided by Birmingham City University, United Kingdom
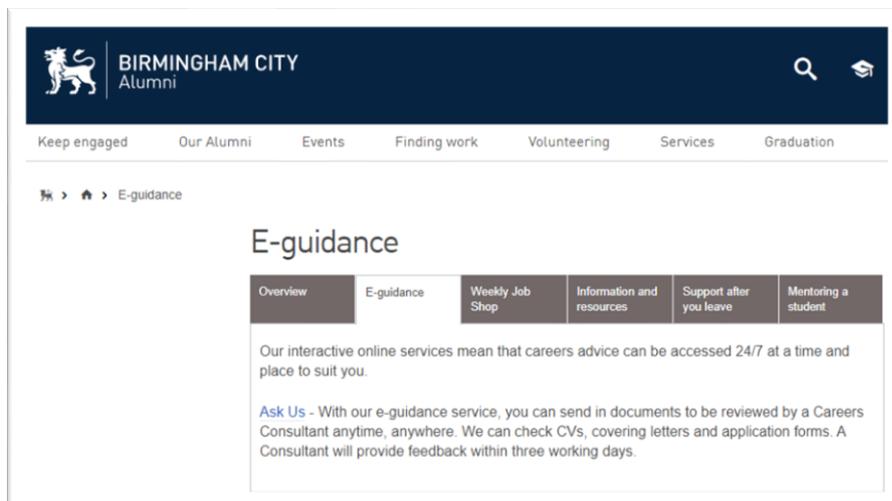
## 4.3   Emiero – career advisor

Web pages: https://www.emiero.com/

Description: Private web pages

Languages: EN, SK, CZ, HU

E-guidance: asynchronous

Emiero is example of e-guidance web pages with self-assessment tests supported by career guidance counsellor. There is one short (20 questions) and one longer (60 questions) test versions that measure psychological preferences in how people perceive the world and make their decisions (Fig. 10). These preferences were derived from the typological theories proposed by Carl Gustav Jung. By completing a longer test, more accurate results can be obtained. The test results assign the respondent to one of 16 personality types and offer a list of suitable professions. A bonus is the list of world-famous people who have the same type of personality as the respondent.

Figure 10: Emiero – career advisor
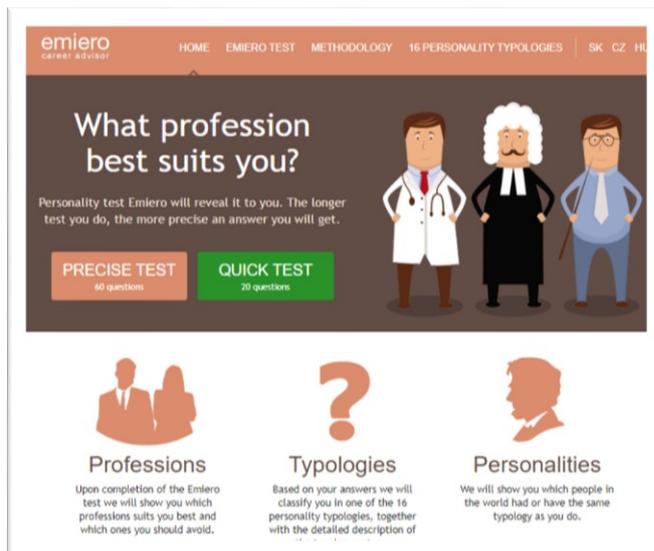
4.4   Ireland, iCareer

Web pages: https://www.icareer.ie/
Description: Private service web pages
Language: EN
E-guidance: synchronous and asynchronous

The counselling centre specializes in solving the professional development and planning needs of high school students, but also in other areas, helping them to identify and obtain the source of their ideal work and career and choose the right further training courses. iCareer work with people from all walks of life, helping them identify and source their ideal job and career and choose the right further education courses (Fig. 11).

Figure 11: iCareer, Career planning for young people
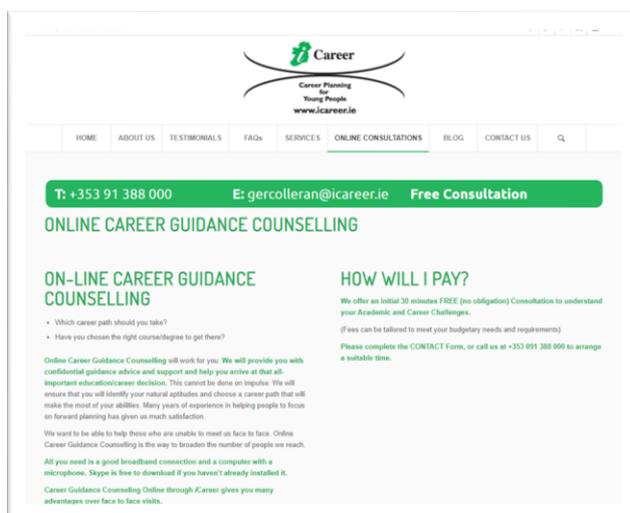
5 Challenges and risks in e-guidance

The use of ICT for the development of CMS has its advantages, but also pitfalls. It changes the way information is conveyed, increases its availability and reduces the cost of publishing it. ICT is changing the way individuals interact with information, with each other and with the labour market. At the same time, there is still a certain group of people who, for various reasons, do not use ICT and the services provided through them.[22] In this chapter we use the works of C. Nucuta to specify following challenges and risks in e-guidance. [23]

5.1 Individual guidance support

The e-guidance providers must be aware of certain restrictions that e-guidance may impose, i.e. that some of potential clients would not be able to use their e-guidance services fully or at all. These are especially individuals who have risk reading disabilities, limited verbal ability, limited knowledge, confidence, and motivation, as well as negative career thoughts.

For these clients it is recommended to provide various contacts to qualified and credentialed career guidance counsellors and strictly indicate the circumstances when self-help is inappropriate and when assistance is likely needed from a career guidance practitioner.

5.2 Informed consent

If the client's personal data is collected, the client must be informed and his consent must be obtained. The e-guidance portal must allow the removal of client information at any time upon a personal request.

5.3 The e-guidance elements validity

E-guidance provider has to be sure on validity of all e-guidance elements which means that all publicly available e-guidance elements:
- have been obtained in a legal form,
- are validated for self-help use,
- have evidence of the quality of the assessment; assessments originally developed in paper-and-pencil format have been tested in the computer delivery mode,

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[22] HOOLEY, T., HUTCHINSON, J, WATTS, A.G. (2010) *Careering thought the web.* UK Commission for employment and skills. The potential of Web 2.0 and 3.0 technologies for career development and career support services. http://www.ukces.org.uk/assets/bispartners/ukces/docs/publications/careering-through-the-web.pdf

[23] NUCUTA, C. (2009) *Ethics in e-guidance, privacy and security devices.* https://slideplayer.com/slide/6404519/ - The whole chapter has been taken over and slightly modified

- are intended for purpose, the target audience, and the potential use,
- have clearly visible date of publication,
- are up-to-date, accurate and free from distortion caused by self-serving bias, sex stereotyping and/or other by form.

5.4   The e-guidance career counsellor

Career guidance counsellors must be properly trained and aware of multicultural issues as well as on local circumstances that may have an impact on the client.

5.5   Personal data security

Collected personal by e-guidance data must:
- be adequate and relevant,
- processed fairly and lawfully, used only for the specified purpose and may not be provided to third parties,
- processed in accordance with the rights of the data subject and stored for no longer than is declared to be retained.

5.6   Devices security

All ICT devices involved in e-guidance must comply with security rules and ensure secure communication and access.

6 Conclusions

Digitization is necessarily increasingly reflected in career guidance, in which the term e-guidance is used for the incorporation of ICT in it. The aim of ICT implementation in career counseling is to offer career services, tools, instruments, aids, information, etc. to the widest possible potential clientele, enriching career counseling portals with elements of electronic counseling, improving access that will increase awareness of career development programs and services to wide public. One of the important tasks in the design and development of e-guidance is to adapt online services to the diversity of its users and the diversity of their further career development needs.[24]

E-guidance appears to be an effective tool in development of career management skills. It has great advantages in this respect, but also pitfalls. Among the most important pitfalls is that the client may rely too much on the results of a computer evaluation without any consultation with a career guidance counsellor. E-guidance has the potential to provide existing or expand services with the same or less resources to more clients.[25] It changes the way information is transmitted, increases its availability and reduces the cost of publishing it. ICT is changing the way individuals interact with information, with each other as well as with the labour market. At the same time, there is still a certain group of people who, for various reasons, do not use ICT and the services provided through them.[26]

In recent internet, there are many different websites providing wide range of different e-guidance elements. There are for example online guides on how to apply for a job vacancy, where to look for information on further education, where and how to find a career orientation. There are also job servers with the option of selecting vacancies according to various personal parameters or websites offering of educational opportunities. In addition, there is a wide range of websites on the Internet that deal with career guidance, provide career guidance information and online tools and applications that have a wide range of focus, professional level, quality of workmanship, target audience, etc. Some of these e-guidance elements are provided free of charge, others for a fee. This website is owned by various entities such as public employment services, government, trade unions, career and

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[24] VOURINEN, R. (2019) *Recent trends in lifelong guidance practice.*
https://www.slideshare.net/Nordvux/recent-trends-in-lifelong-guidance-practice

[25] BOS – Belgrade Open School. (2017*) ICT platform for inclusive career services: Virtual counselling in Serbia.*
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[26] HOOLEY, T., HUTCHINSON, J, WATTS, A.G. (2010) *Careering thought the web.* UK Commission for employment and skills. The potential of Web 2.0 and 3.0 technologies for career development and career support services. http://www.ukces.org.uk/assets/bispartners/ukces/docs/publications/careering-through-the-web.pdf

youth centres, NGOs, educators, career counsellors, etc. Only in exceptional cases does this website deal with CMS.

The question is whether all such websites can be considered as e-guidance or not. The authors of this study leave this question unanswered and recommend it for wider expert discussion. To this end, it is also recommended to revise previously mentioned following definition of e-guidance created within ELGPN:

„Counselling or guidance that is delivered using ICT and which may or may not directly involves a guidance counsellor. Frequently used to describe the provision of information or the use of self-assessment tools and exercises via the internet." [27]

Despite the e-guidance typology we have created and is given in 2nd chapter, it is not easy in all cases to clearly distinguish what is in line with the ELGPN definition of e-guidance and what is not in line with it. While for e-guidance with the support of a career counsellor, inclusion is easy, for the second branch of our typology it is more difficult.

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Europass, https://europa.eu/europass/

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[27]   ELGPN. *Glossary*. Term e-guidance. http://www.elgpn.eu/elgpndb/search/metadata/view/206

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