Game of Profies

HR Recruitment Gamification

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Contents

Introduction

In the modern society, many conventional processes and techniques of carrying business are becoming obsolete, opening space for innovative ideas and practices. In sales, for instance, more and more companies realize that their traditional push-towards-customer models do not work anymore, since clients, being overloaded with hundreds of offerings, become immune and uninterested. Instead, innovative businesses adopt pull-models in sales, inviting people into their "trap" by triggering their excitement through challenging them.

The same phenomenon is currently observed in the job market (though from the opposite angle), where young, game-playing generations are dominating the workforce. Business firms of all sizes and specialized hiring companies are facing the problem of finding and retaining talent, who show low responsiveness to the conventional motivational stimuli. That is why learning to speak the language of these youngsters becomes interesting for companies.

'Game of Profies' is an HR tool called to address the problem of engaging young people into the job market and revealing the best candidates through challenging them in an environment, which they are accustomed to. We provide a digital platform for companies to acquire talent through gamification of the hiring process.

A thoroughly worked-out content, which can be developed and further customized based on the corporate philosophy and hiring needs, as well as modern dynamic design, will allow the company to assess both the professional skills and knowledge of the candidate, but also measure her behavioral and emotional capabilities. Thus, the platform is based on a 3-dimentional model comprising of the following three pillars that overlap with each other to some extent: Professional knowledge, Behavioral skills and Emotional intelligence.

Along with its main purpose of tapping new talent with specific knowledge, life-style and conduct, the platform will suggest such solutions, as speeding up the recruitment process and lowering its costs, limiting unconscious biases of recruiters as humans, making head hunting truly global and promoting workforce diversity, etc.

Our group initially concentrated on developing a sample game scenario and content in the audit field. This will help us to deliver a better pitch of our start-up idea in front of the university professors, potential investors and partners, making it possible to find funding and develop partnerships. The results of preliminary desk research gave our team first understanding of modern trends in the recruitment sphere and made us believe that such a platform might enjoy a high global demand. Simultaneously, we carried out a market research in the form of a survey for HR professionals in Yerevan, Armenia, which allowed assessing the local demand for such a product. Improvement of the project idea and the analysis of the obtained survey results are the main deliverables of this paper. Further research is needed to reveal the worldwide willingness to pay for our solution and suggest the revenue generation model. However, these goals are out of the scope this course and will be targeted within the framework of other disciplines at a later stage.

Problem Statement

As the elder baby-boomers generation is reaching its retirement age, millennials, described by demographers as those, who are born between early 1980s and early 2000s, are becoming the main players in the job market. The word "player" in the previous phrase has a truly dual meaning. This is a generation of video- and computer-gamers, whose societal behavior is characterized with such terms, as web literacy, social collaboration and digital reputation. Gradually, these social phenomena are penetrating the recruitment culture to allow optimal workforce supply-and-demand balance, both from the quantitative and qualitative perspectives.

The abovementioned processes have prompted growing demand by different size businesses and specialized hiring companies to find ways of *overcoming the non-responsiveness barrier of the workforce* to conventional incentives, such as the working conditions, normal pay or the possibility of future growth, which are increasingly viewed by the youngsters as granted. Many firms are searching for modern digital solutions, which will let them *find and retain talent through challenging the young applicant in such a familiar virtual setting, as a game environment*. They look to engage with the perspective employee through the gamification of the hiring process.

Gamification of recruitment process also addresses the problem of *finding if not a perfect, then an adequate match of the applicant to the vacant position*. Accurately designed and presented gaming milieu will allow to discover "that special someone" among many candidates through correlating personality unique traits with the recruiting organization's culture and strategic needs. Creative companies look for solutions with thoroughly developed content and modern design, which, while playing, will trigger dopamine secretion in the gamer-applicant's body, thus leading to out-of-the-box thinking and stunning solutions. The hiring firm will thus be able *to comprehensively assess the professional knowledge and skills of his future team member, but also her behavioral capabilities and emotional intelligence.*

Along with obtaining the possibility of finding a unique talent for a unique job, the headhunters are also considering *getting global outreach of their recruitment efforts, as well as promoting workforce diversification*. With the growing number of households worldwide having a device for playing computer games for children under 18, as well as recent liberal immigration policies of many western states, the success of such a global hiring platform seems to be guaranteed.

Several other problems that companies are trying to solve are connected with *the speed of recruitment and real-time feedback,* including those in a form of track progress and score points*; lowering hiring costs through saving on travel, venue and other expenses; as well as limiting unconscious biases in the selection process by recruiters as humans.*

'Game of Profies' is an employee engagement digital platform, which will try to address the abovementioned problems as described in the further sections of this paper.

Product Description

'Game of Profies' is a digital HR recruitment platform whose *main purpose is to enable companies to engage young people into the job market and find best candidates through challenging them in a computer game environment*, to which they are well accustomed. This is a *B2B solution for businesses and specialized recruitment companies of all sizes*, which allows them *to recruit talent through gamification of the hiring process*. The initial

prototype of the game and *minimum viable product will be developed for the Audit industry*. At a later stage, the scope can be enlarged *to virtually every field*, tackling also *educational institutions and governmental agencies* as our clients in a remote perspective.

The timing of the project seems to be the ideal one taking into consideration the social developments already described in the previous sections of this work, but also in light of the emerging competitive landscape further discussed in our preliminary analysis section.

The game itself will have *modern and dynamic design*. It will *feature comics' characters* of different race, gender and lifestyle (See Appendix 1 for some inspiring screenshots taken from Dimitri Vegas & Like Mike video clips). The video games will be fun but not repetitive, meaning that *multiple scenarios* should be worked out to randomly pop-up on every further step of the gamer-applicant. Further features and setting need to be developed, including those about how to guarantee that the applicant plays alone without networking or being assisted by a friend.

The creation of the game content is the biggest challenge of our team. Ideally, it will have a *thoroughly worked-out content*, which can be *further developed and fully customized based on the corporate philosophy and hiring needs* of the recruiting company. Compared with the traditional assessment tools, the responses of the candidate and the overall game outcome will provide deeper insights into the applicant's profile, allowing to assess both her professional skills and knowledge, and behavioral and emotional capabilities.

To reach this goal our team plans to develop a sophisticated *3-dimentional model*, which will be based on the following three overlapping pillars: Professional knowledge, Behavioral skills and Emotional intelligence (See Diagram 1).

As a basis for our model, we took the KSA – knowledge, skills, abilities – system currently used in the United States for Federal Government employment. The candidate is assessed as to the theoretical knowledge she possesses, her ability to apply it, as well as personal traits enabling to achieve the desired result.
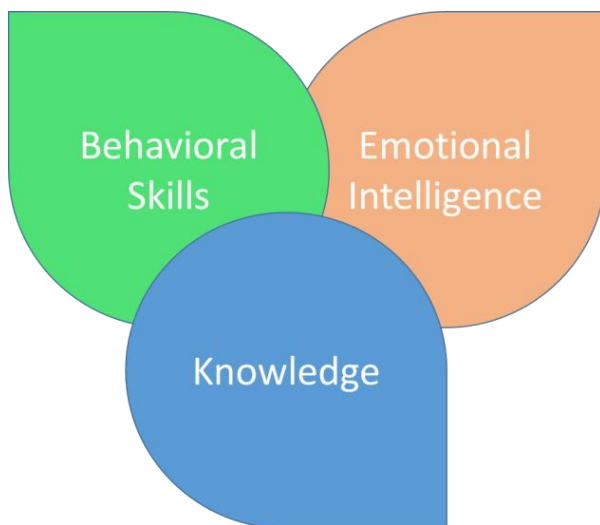
Diagram 1 – The 3D Model

At the same time, we supplemented the model with the component that addresses the need of the modern recruiter to understand how the candidate will behave and act under certain work conditions, whether she fits the organizational culture of the company, and if her conduct meets the expectations of the recruiter. This must be done in an objective way, stemming from the needs of the job and in no way discriminating the candidate or applying any kind of prejudice.[1]

The first pillar of our model is the *professional knowledge* of the applicant or her overall level of education. These criteria represent a continuum, which based on the company needs and vacancy level has a very specific scope at one end and a very loose one at another. For the beginners, it can be squeezed into just a few situational questions to show their overall awareness profile. In contrast, for applicants for senior positions, the complexity level of the game can go as deep as the one of professional accreditation tests. Naturally, for these type of exercises, the aspiring candidate needs to get the highest scores.

The second pillar concerns the *behavioral skills* of the player. These modules of the game can contain hidden features and tricky situations called to reveal the human kind of the candidate. Honesty versus propensity to lie or hide, perseverance versus easily giving up, are some of the personal traits to be discovered here. In such cases, the seriousness of

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[1] https://hbr.org/2013/09/how-to-use-psychometric-testin

the situation can go to the extreme where pulling out of the game can be the only correct outcome. An example of this is an event in the audit game when all suggested options contain a concealed bribe[2]. Here, obviously, getting the highest score is not a must.

The third dimension of the model is connected with the *emotional intelligence* of a young applicant, her psychological skills. The Oxford Dictionary describes emotional intelligence as "the capacity to be aware of, control, and express one's emotions, and to handle interpersonal relationships judiciously and empathetically"[3]. Many modern companies increasingly consider these soft skills as very important and curtail their hiring philosophy accordingly (See Appendix 2 for more detailed, but not exhaustive, list of components of behavioral skills and emotional intelligence).

As already mentioned, the creation of the game content and design is the most difficult task for our team. At the same time and as kindly advised by our interviewed experts from the Auditing Department of the Central Bank of Armenia, the guiding basis can be the ACCA Code of Ethics and Conduct (the Code), which is binding document on all the members and students of this professional body, or the Institute of Internal Auditors' Global Internal Audit Competency Framework. Another source for content creation can be professionally designed educational case studies. Finally, the content formation can be completely outsourced to a specialized company. Our challenge then will be how to bring the content into an exciting game environment.

Preliminary analysis: Desk and Internet Research

A preliminary desk and internet research has been conducted on the use of gaming in the recruitment and talent management processes. Some of the findings are presented below.

In 2017, economists Mark Aguilar, Mark Bils, Kerwin Charles and Erik Hurst published a research paper, in which their compiled data from 2000 to 2015 suggested a *positive correlation between video games and unemployment* of young people. In countries, where the economic situation worsens and video games become more affordable, youngsters

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[2] The example of concealed bribe was kindly suggested by Vazgen Hakobjanyan, Teamable
[3] https://en.oxforddictionaries.com/definition/emotional_intelligence

prefer playing games. This allows them to stay away from dangerous practices, such as alcohol or drug addiction, and delivers them pseudo-social engagement and entertainment, whereas their challenging pursuit for employment requires consistency and perseverance. The paper further envisages that, while the games become more interesting and sophisticated, the number of unemployed young people opting to game versus focusing on career start and advancement will probably increase. Thus, the changing economic, social and cultural landscape requires modernizing / digitalizing the hiring process[4].

One of the first organizations to come up with the idea of using games to recruit and train staff is, not surprisingly, the U.S. Army. Its initial efforts date back to 1999, whereas the first version of the game called 'America's Army' was released in 2002. Since then, it has attracted millions of new recruits, but also served a general role of promoting awareness of the U.S. armed forces. Currently, the U.S. Army has *turned its knowledge and experience of digital training games into a powerful recruiting tool*[5].

Gradually, along with the narrower concept of gamification, which is thought about as 'something to do with online gaming', a deeper notion of the term emerged in late 2000s. The modern definition of gamification is '*the concept of applying the design techniques and mechanics of games in order to engage and therefore motivate individuals to reach their goals*'[6]. First, this new approach was willingly embraced by *academia, educational institutions and training companies*. Some successful examples are Kaplan University, Beat the GMAT, and virtual training academy Treehouse.

First companies, which started to experiment with gamification, are those that enjoy *high interest of the newly-graduates*, such as Unilever, Big four, etc. For example, for hiring 1'400 graduates and 600 interns PriceWaterhouseCoopers UK receives 39'000 applications, KPMG – 20'000 for 1'000, and Ernst & Young – 12'000 for 800 vacancies. Another giant enjoying big demand from labor market is Unilever. In 2016, it received 250'000 applications globally. In fact, the company is the first to fully digitalize the process of hiring, using both 20-minute games and video-interviews for assessment[7].

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[4] https://www.economist.com/blogs/economist-explains/2017/03/economist-explains-24
[5] https://www.clicksoftware.com/blog/top-25-best-examples-of-gamification-in-business/
[6] http://www.applauseit.co.uk/blog/can-gamification-improve-your-recruitment-strategy/
[7] http://news.efinancialcareers.com/uk-en/212451/how-to-get-a-job-with-the-big-four

At the same time, there is a dare need not only to attract the 'beautiful minds' but also to be able *to retain and engage them in their work.* This can be achieved through offering employees games to play, which serves as *a non-financial motivator and a platform for recognition from peers*, an important factor, too. As an example, we can bring the WooBoard Engagement and Recognition Platform[8]

Many companies, such as Bloomberg, Barclay's, Ernst & Young, Cisco, HSBC, City Group, Hewlett Packard and others, are *outsourcing* the 'Debut' app to select interns and employees from among the widest possible sample[9]. Others are *developing in-house solutions*, such as 'Plantville' by Siemens Industry[10], 'Quest for Oil" by Maersk[11] or 'Deloitte Leadership Academy' by Deloitte[12]. Several dozen start-up companies worldwide are also coming up with new solutions in this sphere. One recent example is the Armenian start-up CodeFights, which obtained $2.4 million in seed funding in 2015 to further develop its 'code battles' social game[13].

Among these big companies-recruiters, there exists a consensus that recruitment through gaming contributes both to the *efficiency and efficacy of the procedures*. According to KPMG Australia, their recruitment costs have been cut by 79%, and the number of personal interviews – by 58%.

On the other hand, *some skepticism and fear* is expressed by experts that too much reliance on these new gamified tools of recruitment, for many advantages it has, may underestimate the importance of personal interaction and jeopardize testing of such skills as negotiations and communications. It may also divert those of senior generation possessing good knowledge but not so techie. So far, the companies using the video games in their recruitment process do this in conjunction with other forms of testing, such as video-, and personal interviews.

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[8] http://www.wooboard.com/features
[9] http://debut.careers/current-employers/
[10] http://www.enterprise-gamification.com/mediawiki/index.php?title=Plantville
[11] http://www.maersk.com/en/hardware/quest-for-oil
[12] https://hbr.org/2013/01/how-deloitte-made-learning-a-g
[13] https://techcrunch.com/2015/04/02/codefights-scores-2-4-million-to-turn-coding-practice-into-a-game/

Market Research: Survey Design

After the secondary data had been gathered through the desk and internet research, our group has carried out a survey and conducted four face-to-face interviews, which pursue multiple aims and objectives. First of all, the survey was aimed to support or refute the findings of our preliminary research, which played a vital role in the problem formulation and product design. At the same time, it was meant to help fine-tune the project and make it more consumer-driven as it accumulates relevant information about the human resources management market.

A questionnaire as a method of survey was selected for its inexpensiveness, speed and simplicity, while interviewing – for deeper insight and understanding of the problems recruiters and talent managers usually face in the course of hiring process and employee management.

The methodology chosen for the survey was data collection through the target group, i.e. the recruiters' and talent managers' community in Yerevan, Armenia. The web questionnaire was sent out to specific e-mails, as well as posted in professional social networks, such as Loft HR Club on Facebook.

The questionnaire was designed so that to capture the following information (See Appendix 3 for details):

- company demographics: company size, industry, etc.
- information about organization of the recruitment process at the company
- methods used during the recruitment process, alternative tools inclusive
- the 'weakest link' in the recruitment process that can be taken as a target for improvement
- willingness to pay for the 'pill', i.e. a gamified recruitment platform
- expenditures budgeted for the recruitment tools
- opinion about gamification as an instrument to be used in the recruitment process.

Survey and Interview Results

Through the questionnaire, we firstly screened our respondents, since some of the talent managers are not directly involved in the recruiting process. Thus, we differentiated among them: out of the total 20 replies received, 16 respondents were involved in the recruiting process, while 4 replied negatively.

As the questionnaire did not target a specific field, it was important to obtain information about the industries our respondents represented. The results were: 8 from IT, 4 from Banking and Finance, 2 from Education, 1 from Business Consultancy, Research and Telecommunications each. Three respondents did not specify their sphere.

The picture of company demographics was evenly distributed, with the half of the respondents representing companies with less than 100 employees, and another half more than 500.

Seventy percent of the respondent companies organize recruitment internally, while the rest partially uses external sources.

One of our objectives was to learn which stage of the recruitment process is the most troublesome for the recruiter, so that our product might be designed to offer a fringe benefit for the recruiter, for example, cutting the time or solving a specific problem. From the list of key stages of the recruitment process, the face-to-face interviews were quoted as the most costly and time-consuming: almost one third of the respondents selected this answer. With regard to the time consumption, face-to-face interviews were followed by screening applications: 5 respondents out of 20. Four out of 20 respondents saw application screening as a target for cost reduction.

Skill-measuring / lack of skilled candidates and lengthiness of the process were the main constraints mentioned by our respondents.

While more than 60% of our respondents either partially or completely rely on some kind of a platform, the expenditure pattern was versatile, ranging from 100 to 1'500 USD.

Despite the fact that a concrete product offer was absent and it was somewhat premature to obtain a valuable feedback, still, approximately 67% of respondents expressed

willingness to implement gamification in their recruitment process. Out of these positive respondents, almost one-third accounted for the IT sector recruiters.

Overall, due to the lack of time our survey targeted only the Armenian market (See Appendix 4 for graphical representation of the obtained data). For the meantime, the conducted face-to-face interviews with Audit and HR professionals also supported our global vision of the project and gave us valuable insight about its future size and shape. However, further research should be conducted within the framework of other disciplines to reveal the worldwide demand for our solution, carry out cost-benefit analysis and draw financial projections.

Conclusion

The initial research carried out within the framework of the AUA CBE's 'Entrepreneurship, Innovation and Incubation' course allows our group to judge about the vivid interest by different-size businesses and specialized recruiting companies towards a B2B digital platform as a tool to acquire talent through gamification of the hiring process. At the same time and despite clearer outline of the project idea, the creation of the content and design of the game still are at a nascent phase. Additional research is also needed to reveal the worldwide willingness to pay for our solution and suggest the revenue generation model. Further steps can include:

- Conducting a comprehensive market research in San Francisco area
- Building the business and revenue generation models for the venture
- Identifying existing risks
- Involving partners, including the game-developer
- Developing a sample game scenario that will show the benefits of such a game over the orthodox methods of recruitment, identifying the knowledge, skills and psycho-personal traits the player should possess to score high in the game
- Building a Minimum Viable Product: creating a prototype and testing it within a sample of target groups
- Based on the obtained results, fine-tune, amend and improve the product

- Deciding on distribution channels
- Developing financial projections, and based on projected costs and revenue streams, pricing the product, as well as calculating the net present value of the venture
- Elaborating the exit strategies and calculating the intrinsic value of the company essential for the ultimate pricing of the company.

Appendix 1 – Tentative Game Appearance[14]
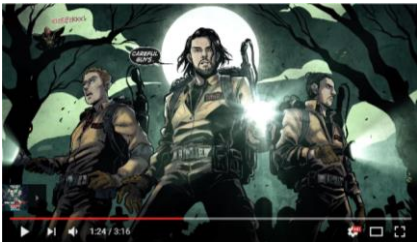
Appendix 2 – 3D Model
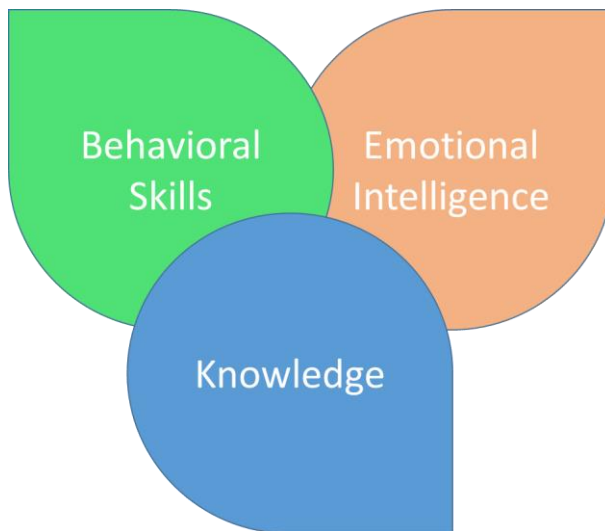
* Please note the overlapping areas.

Sample elements of professional and overall knowledge:

Profession-related knowledge, experience, insight and skills

Overall educational level and area of thought.

Sample elements of behavioral skills:

Apologizing

Arranging problems by importance

Concentrating on a task

Deciding what caused a problem

Following instructions

Listening

Making a Decision

Negotiating.

Emotional intelligence:

Self-awareness

Self-regulation

Motivation

Empathy

Social skills.

Appendix 3 – Survey Questionnaire

1. Are you involved in the recruitment process in your company?
   Yes
   No

2. The recruitment process at your company is organized by the internal resources?
   Yes
   Partially yes
   No

3. Please indicate what tools do you use during the recruitment process from the below list. Choose all that apply.

Application screening	Computer based interview
Paper based testing	Reference checks
Computer based testing	Screening interviews
Face-to-face interviews	Other, please indicate

4. How do you rate the efficiency of your recruitment process?
   Cannot answer
   Poor
   Average
   Good
   Very good

5. Please select the most costly stage(s) of the recruitment process.

Application screening	Computer based interview
Paper based testing	Reference checks
Computer based testing	Screening interviews
Face-to-face interviews	Other, please indicate

6. Please select the most time consuming stage(s) of the recruitment process.

Application screening	Computer based interview
Paper based testing	Reference checks
Computer based testing	Screening interviews
Face-to-face interviews	Other, please indicate

7. In which stage(s) of the recruitment process would you reduce the costs?

Application screening	Computer based interview
Paper based testing	Reference checks
Computer based testing	Screening interviews
Face-to-face interviews	Other, please indicate

8. Which stage(s) of the recruitment process would you speed up?

Application screening	Computer based interview
Paper based testing	Reference checks
Computer based testing	Screening interviews
Face-to-face interviews	Other, please indicate

9. What are the common constraints in the recruitment process?
   Lengthiness
   Budget

Distance
Skill measuring
Other, please indicate

10. Do you use alternative tools?
    Junior specialists
    Specialists
    Senior specialists
    Managers
    Top managers

11. Do you use any platform for the recruitment process?
    Yes
    Partially yes
    No

12. How much do you spend annually for the recruitment platform? Please provide an average amount.

13. Would you use gamified recruitment platform (recruitment process through computer-based games)?
    Definitely yes
    Probably yes
    I don't know
    Probably no
    Definitely no

14. How much are you ready to spend annually for the modern-gamified recruitment platform?

15. Would you use the alternative recruitment tools for company's brand improvement?
    Definitely yes
    Probably yes
    I don't know
    Probably no
    Definitely no

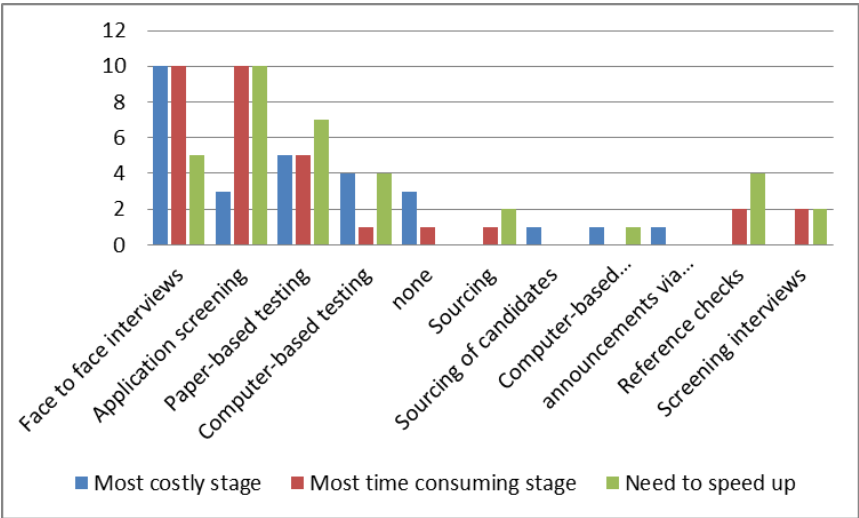   Please indicate the field of activity of your company.
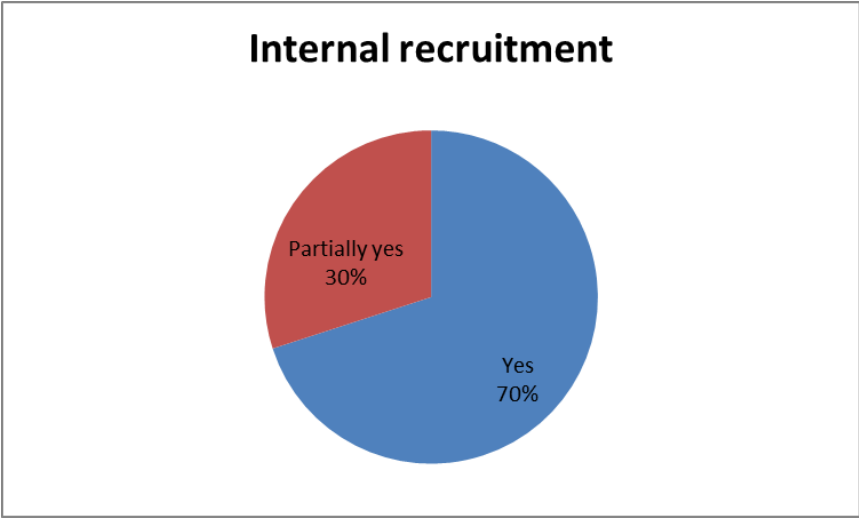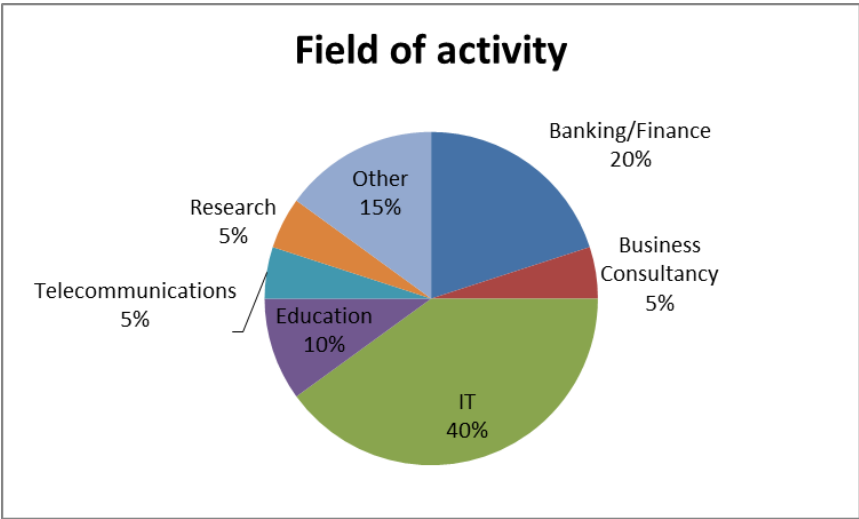   Audit   Telecommunications
    Banking/Finance   Education
    Insurance   Research
    IT   Business consultancy
    Retail   Manufacturing
    On-line retail   Other, please indicate

    Please indicate the number of employees at your company.
    < 50
    51 – 100
    101 – 250
    250 – 500
    501 <

Appendix 4 – Survey Results

Field of activity

- Banking/Finance 20%
- Business Consultancy 5%
- IT 40%
- Education 10%
- Telecommunications 5%
- Research 5%
- Other 15%

Internal recruitment

- Yes 70%
- Partially yes 30%

Categories: Face to face interviews, Application screening, Paper-based testing, Computer-based testing, none, Sourcing, Sourcing of candidates, Computer-based..., announcements via..., Reference checks, Screening interviews

Legend: ■ Most costly stage ■ Most time consuming stage ■ Need to speed up

Common constraints in the recruitment process

	Lengthiness	Budget	Distance	Skill measuring
Value	9	6	3	12

Positions for alternative tools

	Junior specialists	Specialists	Senior specialists	Managers	Top managers
Value	5	6	10	13	11

- Gamified recruitment platform
- Gamification for company's brand improvement

	Definitely yes	Probably yes	I don't know	Probably no	Definitely no
Gamified recruitment platform	15	55	15	5	10
Gamification for company's brand improvement	45	55	5		