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The Role of Game-Based Learning in Career Development and Job Placement of Young People with Intellectual Disability

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Abstract

The European Employment Strategy has established as a main objective the inclusion of disadvantaged people on the labor market by promoting open employment strategies. In this framework, it is desirable to identify and remove barriers that hinder the employment of people with disabilities.

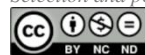
The most important skill needed to work in adult life for students with intellectual disability is the ability to cope with social situations. The training and the development of social skills needed to work and lead to an independent life is a major goal for students with intellectual disability. The disappearance from the curriculum for special education of some subjects such as "Education for adulthood" represents a barrier to the formation and social integration of young people with intellectual disability. Independent life skills represent the minimum of skills that allow the owner to develop a normal social life, thus limiting the need for assistance or accompaniment from social services.

Forming social skills for young people with intellectual disabilities could shorten the gap between educational provision and their employment needs by allowing young people to integrate much easier.

In this article, we want to analyse the importance of entrepreneurial education through virtual games. Nowadays, virtual games occupy a great deal of young people's time, being at the top of their preferences, motivating them and forming their interests. Starting from this idea, we want to

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present a prototype of an entrepreneurial game, accessible to young people with intellectual disabilities, through which they can develop the necessary skills for a future job placement.

Keywords:

Intellectual disability, employment, business game, job placement, work

1. Introduction

The most important required skill in order to fit into the work and the adult life of students with intellectual disability is the ability to socially cope with the environment. For this reason, the creation and development of the social skills required to work and to lead an independent life represents a major objective of students with intellectual disability' education.

Independent life skills are the minimal skills' luggage which allow one individual to develop a normal social life, thus limiting the need for assistance or accompaniment from the social services.

Those skills areas which need to be formed during childhood and adolescence, and which contribute to their social formation, are:

- Day-to-day life skills (nutritious, food purchase, food preparation, kitchen cleaning and food storage, as well as house security);
- The use of community resources skills (transport and community resources);
- Money management skills (notions of money, savings, income and taxes, bank operations, consumer skills);
- Personal care skills (healthy lifestyle, correct sexuality);
- Social development skills (connection with others, communication, social relationships);
- Professional integration skills (skills regarding the hiring, finding and keeping the workplace etc.).

The skills for an independent life, necessary for each individual, can be divided into four areas:

- elementary skills (writing, reading and counting);
- integration on the labour market skills;
- life skills (day-to-day),
- psycho-social skills [1], [2].

In order for the young people who finish school to be prepared to live independently, they need to master skills in all four areas, which are also interdependent. Successful training of young people for an independent life, depends on their way of acquiring skills such as employment, life skills, self-confidence, as well as individual, personal and interpersonal skills.

2. Supported self-employment as a career option for individuals with disabilities

Supported self-employment represents a recent model of employability for people with disabilities. This model of employability has been described as a micro-enterprise, namely as a small business created around a person with special needs. Work-related earnings, work-related decisions, the manner in which time is allocated, what kind of time and money investments should be made, in what manner to allocate the generated revenue - are matters decided by the person with disabilities around whom the entire business is built.

The implementation of this model of employability in countries with a highly developed economy has revealed some aspects that fully favour people with special needs [5]:

- The model observes the ability and the benefits of the intellectually impaired people, focusing on the interests and strengths of people, and also, it can be more flexible in working conditions than the normal hiring;

- Equality is pursued by opening up the self-employment sector on the labour market, where intellectually impaired people are not being represented;

- This option for labour market involvement reflects aspects of the political thinking, regarding the increasing employment for disadvantaged groups and the services development in order to meet the individual needs;

- For some people, it is a way of earning income of a hobby or interest, with support and funding via person-centered planning, direct payments and individualized budgets;

- It provides another perspective for the intellectually impaired person, going from the customer/consumer status to the citizen consumer status.

Taking into account the advantages of this employability model, we consider that the introduction into the school and vocational curriculum counselling of a managerial game which involves the administration of a small business, would be opportune for the stimulation of young people with disabilities to participate into the free labour market.

We continue with the presentation of a managerial simulation game model which could be adapted to the intellectual capabilities of intellectually impaired young people. The game presents the hypothetical situation of a company, specialized in wood processing, a field of activity which can be also found in the educational curriculum of special professional schools or even for ordinary children.

3. Motivation of using game-based learning in career development of young people with intellectual disability

Introducing the use of computer games in education has been a concern for many researchers [3], [6], [7]. The reason for the introduction of the games highlights the already high interest that young people have today in computer games, but also the negative effects it may have. Computer games or phone games pose many dangers when game production is subject to anarchic development, driven by financial reasons. The ban on using games does not solve the problem. In fact, it is said that "The best thing to defend you is to learn to serve of him". At present, it is impossible to constantly supervise the use of computer games or the phone by young people and to defend them in this way from the influence of commercial games. We consider that it is important to promote and encourage the use of valuable educational games in the school and in the social groups in which they participate.

From the analyzed studies, we have found some pedagogical objectives for the use of virtual games in education:

- better and complete understanding of ideas, information presented in games;
- forming a conscious and critical attitude towards a certain game, acquiring the habit and criteria of appreciating a game, capacity of evaluating virtual games in general;
- the initiation of students in virtual educational games is considered necessary because it leads to habituation with some activities and their way of realization.

4. Managerial simulation game

PLAY BUSINESS is a game which makes reference to the operation and management of a simulated company for one year, by adopting some successive rounds of decisions. These decisions relate to hypothetical financial situations regarding the company's business activities, production related decisions, but also decisions related to the company itself.

PLAY BUSINESS is a game that can be summarized as follows:

□ General Managerial Game - simulates the activities of a company, focusing on the achievement of the proposed objectives and the achievement of a high as possible profit;

□ Participatory managerial game - based on the delegation of players into Board of Directors of the simulated companies;

□ Computerized managerial game - ensures the access and the processing of information predominantly with the help of the computer;

□ Interactive managerial game - the decisions and actions adopted and applied by the participants intertwine, influencing one-another to a certain extent.

The main components of the PLAY BUSINESS managerial game:

The board of the virtual company consists of 5-6 pupils/students who are fulfilling managerial positions. Typically, its structure includes:

- The general manager;
- The financial manager;
- The production manager;
- The commercial manager;
- The human resources manager;
- Three more specialists who collaborate with the previous managers, serving as heads of departments (sales, marketing, supply, production etc.).

The tasks of the Board of Directors:

- The development of the company's overall strategy;
- The establishment of the half-yearly, quarterly and monthly plan objectives or tasks;
 - Organizes the tasks which are at company level;
 - Analyses the fulfilling of the tasks which are at the company level;
 - Examines the evolution of the money accumulation and of the company profitability, and takes measures for improvement;
 - Analyses the maintenance manner and the repair of fixed assets, and takes measures for improvement;
 - Establishes measures for the supply with raw materials and materials before the start of the production process;
 - Decides on measures for the rational use of production capacity;
 - Decides the effectuation of investments;
 - Nominalizes capital repairs;
 - Decides the periods and amount of the loans, respectively of the bank deposits that can be created;
 - Approves the pointing and dismissal of middle and lower level managers;
 - Performs other tasks which contribute to a performant management of the company.

Each of the participants in the game is fulfilling certain attributions in accordance to the position it holds in the simulated company's managerial structure.

The other members of the Board of Directors are fulfilling the following main attributions for the field they are coordinating:

- Propose objectives and actions for that particular field of activity and for the company itself;
- Take decisions regarding the monthly plan and the achievement of the monthly objectives according to the annual objectives, the evolution of the company's situation, and the managed field of activity;
 - Monthly, quarterly, and half-yearly it is being analysed in what manner the coordinated activities take place;
 - Collaborate with the other participants in the establishment and harmonization of the decisions, and actions;
 - Carry out any tasks assigned by the general manager of the company.

In this game's framework is being used a programming system installed on a computer network, a system which obtains processes that in a company - for example - woodworking - are done by workers, specialists, managers. The software generates a set of informative hypothetical situations which serve the participants in making decisions about the subsequent actions of the company. For example: the situation of the manufactured products, the situation of the technological lines in operation, the sales situation, the portfolio of new products.

Prior to the beginning of the managerial game, the participants receive the company's situation from the previous year, the decisions taken over the past 3 months and the results obtained by the company in each of the three months from the previous period. On the basis of the received information, the game participants must decide the company's general policy project for the following year, taking into account the following objectives: profit, turnover, production level, salary fund, total proceeds from product sales, company credits etc.

The main decisions which are to be made in the game framework, depending on the received information, and taking into account that it is a company specialized in wood processing, are:

- Decisions for the manufacturing of new products;
- Investment decisions in new technological installations;
- Supply decisions;
- Marketing and sales decisions of products;
- Production decisions;
- Financial decisions;
- Human resources decisions.

The assessment of the game participant's activity and of the virtual managed company's results will take into account the following elements:

- The level of the predicted objectives;
- The extent to which the predicted annual objectives have been met;

- The main issues and the positive aspects manifested by the participants during the simulation;
- The degree of participation and the contribution of each participant to the monthly, half-yearly and annual analyses;
- The assessments of the teacher or game coordinator on the involvement and actual contribution of each pupil/student in the overall management of the company and the domain administered by each of them.

On the half-yearly final, based on these elements, the coordinating teacher assesses and marks down each participant of the game. These appraisals are communicated to the game participants, accompanied by the appropriate comments.

5. Conclusions

Because of the way it is designed, students will be used to integrate the knowledge of virtual play into the school acquisition system, enhancing the effects of game-based education. Introduction of game-based learning as activity in school does not affect the educational process, but makes it easier to solve some problems of efficiency. Game-based learning is also a way in which school responds to current and future widespread social demands.

The projection and the use of a PLAY BUSINESS game would bring countless benefits, of which we mention with priority the following [4]:

- The formation and development of managerial skills and abilities, the creation and development of team spirit, the enhancement of the ability to lead a team;

- The formation and improvement of the students' economic skills and abilities, regarding economic analysis of the phenomena, technical supply, the production programming, the product sales, the analysis of accounting and financial situations;

- The development of a vision and system approaching of the organization. Obtaining performance and simulated business is not possible without ensuring the four essential economic correlations (supply-production, sales-production, production-personnel, production capacity - manufactured production);

- The acceleration of the training processes and managerial capacity improvement by the fact that the simulation of managerial and economic processes lasts for a short period of a few weeks, while the wood processing company lasts for a year;

□ The acquaintance of pupils/students with the management and informatics issues.

Given the many possible benefits that PLAY BUSINESS game could bring, we think of it as a good training approach of young people for the free labour market.

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