

# Networking Supported by Communication Technology and Non-Formal Education as a Part of Career Planning

Alenka Bencek, Violeta Vidaček Hainš  
Faculty of Organization and Informatics  
University of Zagreb  
Pavlinska 2, 42000 Varaždn, Croatia  
albencek@foi.hr, vvidacek@foi.hr

**Abstract.** *Career planning is an important part of the process of tertiary education. The main goal of this research is to explore the opinion of secondary school students regarding the different forms of non-formal education, with an emphasis on volunteering projects, science popularisation projects, sport, involvement in different clubs etc. Training for volunteers using a didactical tool was provided with the support of information and communication online technology.*

*Secondary school students were exposed to usage of a didactical tool, which promotes the importance of tertiary education and different forms of non-formal and informal learning.*

*Results are comments regarding opinions of secondary school student towards the importance of their involvement in different clubs, volunteering and a variety of sport and cultural activities.*

*Responses of secondary school students were commented upon, with an emphasis on their preparation for continuing their education at tertiary level educational institutions, as well as ways of developing competencies for further career planning and involvement in the labour market.*

**Keywords:** Information Communication Technology, Social Competencies, Education

## 1 Introduction

Educational systems include different types of learning, such as formal, non-formal learning and in formal learning. All of them are important parts of career planning and choosing future employment. Formal education is the basis of a formal curriculum. Non-formal learning may be guided by a formal curriculum, but it is based more on the learner's interests and does not necessarily require a formal curriculum. This type of learning does not result in a formal degree or diploma, but it is helpful in building competencies and social skills. Informal learning is outside of formal classes or the education system, without formal teachers and is based on the interests

of all participants. Educators can be family members, peers or the media, or it could be intrinsic motivation based on self regulated learning.

The process of career planning is an important part of education. Interest and motivation for planning a career is increasing amongst secondary school students when they make decisions about their future profession. The different factors are connected with decision making linked to future education and employment, such as family influence, school environment, peers, media etc...

Life career development is a life-long process. This process includes skills and competencies related to decision-making processes from early childhood and needs to be included in the primary school curriculum (Magnuson and Starr 2000). Theoretical and practical activities help students to build skills that could be helpful in searching for a job, establishing positive interpersonal relations and achieving a higher level of autonomy (Mara & Mara, 2010).

The family environment plays an important role in adolescent career goal planning. Adolescents' perceived career-specific parental involvement and warmth positively correlates with career goal motivation and could reduce goal-related stress (Dietrich and Salmela-Aro, 2013). Positive career orientation correlates negatively with possible behavioural problems amongst secondary school students (Skorikov and Vondracek, 2007). In addition, a positive academic environment is correlated to performances in career development. Students that have a better attachment to colleagues and professors, support from peers, better access to equipment, those also expressing positive emotions or those that have a higher level of intrinsic and extrinsic motivation will have statistically a significantly higher percentage of satisfaction with their career orientation choices (Chraif and Anitei, 2012).

A student's gender is linked to a student's value systems for their future employment. Gender is related to career aspiration and gender role norms in terms of moderating the relationships between their perceived status at work and their real value status in work (Thompson and Dahling, 2010). Gender differences are also linked to career planning in terms

of expectations and goals: whilst male optimism and self esteem is linked to career expectations, female optimism is linked directly to career goals, which help female students in planning their career (Patton *et al*, 2004).

Students gather experiences from different types of learning, such as volunteering and service learning. Volunteering experience provides the opportunity for acquiring competencies through non-formal and informal learning experiences (Sleahitiçi and Neacșu, 2013). Commitment to volunteering and motivation to become a volunteer is the result of different variables linked to the volunteer's social environment, such as demographic qualities, personality traits, value system and different social and interpersonal relationships (Matsuba, M.K., Hart, D., Atkins, R., 2007). Volunteers received different benefits from volunteering. Generally, they experienced more life satisfaction through volunteering, particularly when they were older (Van Willigen, 2000).

Support via information and communication technology (ICT) is an important part of organising the learning experiences activities for all types of non-formal and informal learning. The use of ICT at all levels of education enables higher quality education and creates opportunities for more comprehensive learning. It also changes the atmosphere of teaching and learning in a positive way (Ahmadi *et al*, 2011). The effects of information and communication technology (ICT) depends on the level of student's information literacy (Maleki *et al*, 2012) and on the strategy for integrating information and communication technology in the curriculum and activities of higher education institutions (Liu, 2012). This process also includes the collaborative learning amongst secondary school students, particularly with increasing competition and team rival (Sharifi *et al*, 2013). There are factors that enables the efficient usage of the ICT in schools, such as understand the functioning of facilities and security measures, access to information, solutions and procedures implemented by schools (Pires and Moreira, 2012).

ICT helps in networking, collaborative learning and promoting the concept of volunteering at the secondary schools and universities, as well as supporting students in career planning and choosing future jobs.

## 2 Research Goals

The overall objective of this study was to identify the different activities of non-formal education such as volunteering and other types, as a framework for development of student competencies for continuing education and the labour market.

The specific objective was to examine the opinion of secondary school students about different types of non-formal education, such as volunteering and charity work, sports, environmental activities, literature, drama and journalistic activities, etc. Student opinion will be explored in the context of gender issues.

## 3 Methodology

### 3.1 Conducting the Research

The didactical tools 'Graduate Pursuit Mystery Cards' were used for the purpose of popularising tertiary education and sharing information about informal and non-formal ways of education. This tool was used in the cooperation with kind permission of the YMCA of Greater Toronto. It included all the features of a fun board game: cards (67), dice (1), game pieces (one per participant) and a board. Different student activities were described on the cards. Students need to explore and follow the rules described at the cards. The main aim of the tool / game is to pick up as many points as they can and to graduate at the end of the game. The cards were originally written in English and French. They were translated into Croatian and adopted to the Croatian school system.

University students (volunteers) were educated on how to use the tool. Education was organised with Skype and the education was representative of the YMCA of Greater Toronto, as determined by Adela Colhon, Manager of National Programmes of the Canadian Post-Secondary Access Partnership. Permission for using this tool was issued by the YMCA of Greater Toronto. Pilot research was presented at the EAN international conference (Vidacek-Hains *et al*, 2012).

After training volunteers /university students, the research was conducted in the two parts:

**Part 1:** Students from secondary schools used the didactical tool and the cards in a workshop and the workshop was led by university students volunteers trained for this purpose.

**Part 2:** After the game, secondary school students were asked about their opinions of different types of non-formal education (clubs, sport, drama, volunteering...). Collecting feedback with a semantic differential instrument was anonymous and on a voluntary basis.

### 3.2 Respondents

The respondents were third grade students from the Ivanec Secondary School in Croatia, i.e. 16-17 years old. A total of 83 students (28 male and 55 female) were interviewed. They attended general and economic education classes.

### 3.3 Measuring Instrument

Data for this study was collected through a questionnaire consisting of 16 questions. The first few questions were related to general information about students, such as gender, orientation, etc.

This was followed by 9 semantic differential items, for the purposes of measuring attitude. The items were linked to: professional practice, volunteering, sports, environmental activities, charity work, competitions, membership in organisations and associations, a foreign language course and literature, drama and journalistic activities. Each of these 9 questions consisted of 10 pairs of adjectives (e.g. 'positive-negative', 'unselfish-selfish', 'interesting-boring', etc.). Respondents need to estimate their preference for a particular issue in accordance with the pairs of adjectives which were offered to them. The scale was from 1 to 5.

The last few questions were related to testing whether students were engaged in non-formal education activities. In the event that they are engaged in these activities, they were asked to specify the reason for choosing this activity. This can help find out which types of non-formal education secondary school students like mostly.

## 4 Results and Interpretation

After participating in the workshop and using the 'Graduate Pursuit Mystery Cards' didactical tools, students provided an opinion about different types of non-formal education on a semantic differential scale (SD).

### 4.1 Student Opinion Regarding Non-Formal and Informal Education Activities

The results showed that students consider volunteering an extremely valuable, useful, positive and unselfish form of informal education (Figure 1). It is a little surprising that students consider volunteering experience also difficult and demanding due to some long-lasting forms of volunteering requiring the investment of a lot of personal time and effort.

Most student estimates linked to the volunteering had the mode  $M = 4$ . The highest standard deviation in this question concerning interesting-boring pair of adjectives was  $M = 4.048$ ,  $sd = 1.092$ . Students were least consistent in thinking whether they consider volunteering interesting or boring.

WORTH	5	4	3	2	1	WORTHLESS
PLEASANT	5	4	3	2	1	UNPLEASANT
EASY	5	4	3	2	1	HARD
MODERN	5	4	3	2	1	OLD FASHIONED
USEFUL	5	4	3	2	1	USELESS
INTERESTING	5	4	3	2	1	BORING
POSITIVE	5	4	3	2	1	NEGATIVE
UNDEMANDING	5	4	3	2	1	DEMANDING
IMPORTANT	5	4	3	2	1	UNIMPORTANT
UNSELFISH	5	4	3	2	1	SELFISH

Figure 1. Student Attitudes towards Volunteering (N=83)

The most important element for students was how to recognise the true value of volunteering and that they do not stop to continue dealing with them, even if they sometimes require more effort and investment. The role of schools and NGOs is to inform and promote the concept of volunteering.

School can provide examples of best practice through supporting and activities involved in volunteer projects. Volunteering centres outside the schools provide numerous projects connected with different community service projects.

WORTH	5	4	3	2	1	WORTHLESS
PLEASANT	5	4	3	2	1	UNPLEASANT
EASY	5	4	3	2	1	HARD
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IMPORTANT	5	4	3	2	1	UNIMPORTANT
UNSELFISH	5	4	3	2	1	SELFISH

Figure 2. Students Attitudes towards Sporting Activities (N=83)

Sporting activities were evaluated as valuable, pleasant, very helpful and positive. On the other hand, sport activities were considered highly demanding and difficult, probably because of the time that these activities require (Figure 2). The highest dispersion around the mean has the pair of adjectives 'non-demanding-demanding' ( $M = 3.072$ ,  $sd = 1.267$ ).

Sports activities help to build students as team players and develop communication skills and cooperation. This is a relevant element for further student education, as well as personal and professional development. Therefore, it is very important that schools encourage this form of non-formal education by providing a diverse range of sporting activities. The mode of student estimates for sporting activities was also 4. The higher value of student estimates towards sport is on

positive / negative adjectives, with a strong emphasis on the positive evaluation of sport (M=4.699, sd=0,694).

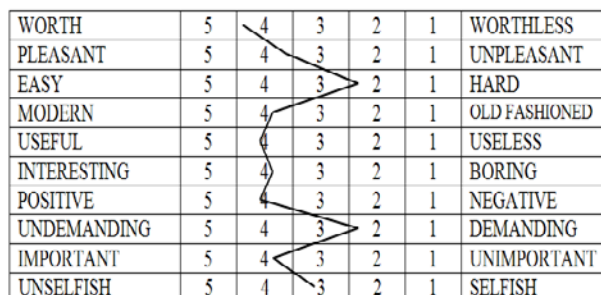


Figure 3. Students Attitudes towards Competitions (N=83)

Students were asked to evaluate competition as a term that could be relevant in their education and career planning. According to their answers, competition was valuable, modern, useful, interesting, positive and important. It was expected that students would evaluate competition as extremely difficult and challenging, because of the investment of time and effort (Figure 3).

Adjectives with the largest dispersion around the average score were ‘unselfish-selfish’ (sd=1.2079, M=3,169). The most positive evaluation of the term competition is with the pair of adjectives ‘worth / worthless’, with an emphasis on the term ‘worth’ (M\*4.410, sd=0.842). This result could be because of a competitive school system and future labour market (Mara & Mara, 2010).

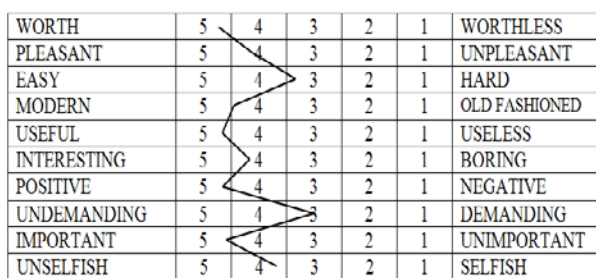


Figure 4. Student Attitudes towards Learning Foreign Languages outside the Regular School Curriculum (N=83)

Currently, with the daily struggle for available jobs, it is sometimes crucial to have knowledge of a foreign language as required by employers (Figure 4).

Language courses that are not part of the school curriculum are organised at language schools. Secondary school student estimate language courses as valuable, useful, positive and important, but also difficult and demanding. According to student ranking, the most important reason for learning a

foreign language is because knowledge of foreign languages is worthy or valuable (M=4,771, sd=0,591).

The highest standard deviation in this question has a non-demanding-demanding pair of adjectives, which means that the dispersion of responses, regarding the average score for this pair of adjectives, is quite bigger than for other pairs of adjectives (M=3.000, sd=1.222).

Although a language course requires a lot of investment, strong will and motivation, it is important that students are aware that it is a very desirable form of informal education.

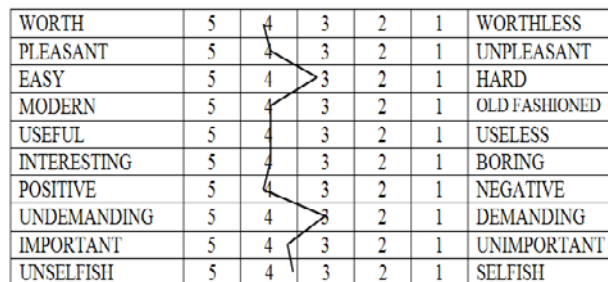


Figure 5. Students Attitudes towards Learning Literature, Drama and Journalistic Activities outside the Regular School Curriculum (N=83)

According to student opinion, literature, drama and journalistic activities are valuable, modern, useful, interesting and positive. They also consider that these activities are mildly difficult and demanding (Figure 5).

This type of activity should be primarily used for the pleasure of students, providing them with the ability to deal with something that interests them outside of class activities. Besides the satisfaction, these activities can be very useful for students in a professional way. All of these types of activities are very important and students need a little more to draw attention to them as they still did not recognise their full value. Schools in their extra-curricular programmes should enable an increasing variety of such activities in which students can get involved.

Generally, the bigger variance for most adjectives is at the ‘interesting-boring’ continuum. The pair of adjectives with lower standard deviation is ‘positive-negative’. Student opinion, if some activities were interesting or boring, depended on individual judgments and was probably based on individual experiences.

The majority of students had a similar opinion how certain forms of non-formal education were positive or negative. On the other hand, students could not agree if certain forms of informal education were interesting or boring, in other words, their opinions were quite different and probably this was the reason why the standard deviation is larger.

All SD adjectives are explored and explained during group discussion with secondary school

students. Group discussions are led by university students - volunteers. Although some adjectives sound similar, there are semantic differences in their understanding and explanation. For example, adjectives such as 'hard' and 'easy' require that students put more or less effort in completing the tasks. Effort could be expressed in terms of working hours or preparatory work. Other example is adjectives such as 'demanding' and 'undemanding'. 'Demanding' activities include more emotional involvement (like volunteering with people with disabilities) and 'undemanding' activities are the opposite of this. That means that some activities could be emotionally demanding and intensive, yet don't require many working hours.

## 4.2 Student Opinion about Activities Linked to Non-Formal and Informal Education

Student attitudes towards different types of non-formal education, such as volunteering and charity work, sports, environmental activities, literature, drama and journalistic activities, etc., are analyzed in the context of gender issues. These activities aren't part of the regular school curriculum and belong to non-formal and informal learning.

The research question is to figure out if there are any statistically significant differences in responses between females and the males linked to the opinion of their importance, positive impact, usefulness etc.

Results show that there is no gender differences in student opinion towards different activities outside the regular school curriculum ( $t=1.064$ ,  $p < 0.01$ ).

## 5 Conclusion

In parallel with formal education, students are exposed to different types of non-formal and informal education, which helps them in developing social competencies. Activities linked to non-formal and informal education are volunteering, sports, environmental activities, charity work, competitions in sport and the like, foreign language courses and literature, drama and journalistic activities as well as activities in other different organisations. Generally, student opinion about these activities was positive. Most of the students thought that those activities were worthy, pleasant, easy, modern, useful, interest, positive, undemanding, important and non-generous. Involvement in different types of non-formal education helped secondary school students in their future career planning. This type of involvement encouraged the development of student competencies and made them more competitive in the labour market.

Future research will be more focused on volunteering and community service activities as a part of career planning. Those activities will be explored and interpreted in the context of networking in the international environment. It would be interesting to explore possible differences in understanding the pairs of adjectives. Differences in understanding could be the limitation of research.

## 6 Acknowledgements

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