

# Developing Business Skills in High School Students Using Project Activities

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**Abstract:** The most important requirement for today's general education is the development of a personality with well-developed business skills. The research aims to experimentally verify the methodology for developing business skills in high school students using project activities. The number of group participants is as follows: 225 high school students aged between 14 and 17 in experimental and control group. The following forms and methods were used: reading biographies of prominent businessmen from all over the world; role-playing situations; meetings with people who have succeeded in economic, entrepreneurial, pedagogical and other fields; visits to companies, enterprises, cultural and scientific institutions; certain business games ("How can one live within one's means?", "Starting a business", "Business communication", "Manager's working week"), conversations on such topics as "Is it difficult to be a businessman?", "How can one succeed in learning?", "Tell me about myself"; the "this is my opinion" student platform. The following diagnostic methods were used: the method called "Determining a self-focus"; the method called "Striving for achievements"; questionnaires about creativity; the communication and organization skills methodology; methods for studying the level of subjective locus of control; methods for identifying risk preparedness; the scale of reactive (situational) and personal anxiety; the tolerance index questionnaire. The number of high school students with a high level of business skills has increased by 12.8% in EG and only by 1.3 in CG. The comparison of the results proves the effectiveness of the proposed methodology for developing business skills in high school students using project activities.

**Keywords:** *business games; target programme; specialized course; lecture course; self-development; training sessions; educational situations; education of pupils.*

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## Introduction

The current socio-economic changes, as well as the introduction of market reforms, have led to the spiritual decline of individuals. Consequently, the most important requirement for today's general education is the cultivation of humane and tolerant personality of the information society with well-developed business skills, which will allow him or her to successfully integrate into the complex social environment and act not only as a consumer but also as a producer, executive, leader, who can perform various social roles and determine the effectiveness and quality of his or her activities.

The development of business skills occurs during all multi-faceted activities at different ages. Secondary schools significantly contribute to the formation and development of the student's personality. The use of different educational tools, forms and methods nurture students' responsibility, organizational and communication skills and encourage them to strive for success. Project activities play an essential role in these processes since they help to develop business skills in the course of certain practical work and personal experience. Besides, appropriate conditions have been created to address the issue of developing business skills in high school students using project activities in the scientific context.

Despite the diversity of approaches to developing business skills, project activities remain beyond the scientific interests of researchers. However, this very issue is related to such issues as creating "a situation of success" in students' life based on project-based learning (Verbytskyi, 2007; Grechukhina, 2002; Pasechnikova, 2009; Polat, 2002; Samokhina, 2003; Smirnova, & Soroko, 2007), developing project culture in teachers and students (Zimnyaya, 2008; Kobernyk, 1997; Freire, 2002); the importance of project activities in the development of students' personal qualities and socialization (Alfimov, 2005; Dewey, 2000; Kyselytsia, 2007; Hopkins, 2006; Yashchuk, 2004) and training teachers for the organization of this process (Elkin, 2005; Ionova, 2007; Pelaheichenko, 2006; Tsybalaru, 2008).

In ancient times, it was believed that all these skills were necessary for effective communication and, at the same time, one could develop vital skills only through hard work. During the Renaissance, personal achievements were considered in the context of intellect, ingenuity and creativity. Existentialism stated that one should fight for dignity, preserve one's personality and strive to develop the most effective business skills in this or that field.

It is important to note that Blonskiy (1956), Kerzhentsev (1968), Makarenko (1968), Umanskiy & Mangutov (1975) proved that the success of the individual in any sphere depends on the development of his or her business skills already during school time. One should pay particular attention to the views of Hipters (2005), Grinshpun (1998), Kremen (1999) and Chaban (2003) which indicate that a modern business person should be well-educated and aware of the problems of their business partners, as well as reliable in all circumstances.

The analysis of activities of general education schools regarding developing business skills shows that this process covers curricular and extracurricular activities in the institution. Still, it is paid most attention in high school. High school incorporates pre-professional training and, therefore, high school students are actively involved in career guidance, learn the basics of economics, law and participate in student self-government.

Over the last decade, projects have been often used to develop business skills in general education schools. High school students conduct scientific research, prepare presentations and required documents to open their businesses, as well as work on research, creative, social and other projects. Despite the widespread use of projects to develop business skills in high school students, such work is not complex. Syllabi of courses and specialized courses do not familiarize high school students with rules and principles and technologies for creating projects. In other words, theoretical training for project creation is not always a pedagogical advantage. Besides, such projects are not implemented in practice, which largely hinders the development of various skills, including business ones.

The generalization of such concepts as “personality”, “skills”, “business” shows that business skills are generalized, specific personality traits that characterize personal potential in social, public, political and industrial fields and, at the same time, determine the success of any activity as a whole. They define business people, who are experts in their field of activity, can set goals and achieve them, work in a team and combine constructive, creative thinking with high moral qualities to transform reality.

The analysis of scientific sources, as well as a survey of 283 entrepreneurs, parents and teachers from general education schools, proves that the most important business skills are competency, responsibility, tolerance, sociability, creativity, organizational skills, striving for success, business focus, self-control and willingness to take risks. These skills are a complex integrated entity, which indicate the development of motivational, cognitive, volitional and emotional spheres of the individual. Thus, the motivational sphere is related to business focus and striving for success; the

cognitive sphere is characterized by competency and creativity; the volitional sphere includes organizational skills, responsibility and willingness to take risks; the emotional sphere involves self-control, sociability and tolerance.

Therefore, modern high school students are seen as business people, future specialists, innovators, organizers and communicators, taking into account the structure of business skills, high school students' social development and characteristics of profile training at schools. High school student as business people are characterized by a clearly expressed business focus, striving for success, ability to generate unusual ideas, organizational skills, self-discipline, independent active actions in terms of risk, ability to mobilize their emotions under non-standard situations, ability to defend their rights and opinions without violating opponents' rights, ability to respect their opinions and dignity, as well as well-developed key competencies.

The analysis of developing business skills in high school students also shows that the introduction of project activities in this process is not complex and regular.

The research aims to theoretically justify and experimentally verify the methodology for developing business skills in high school students using project activities.

## **Material and methods**

General education schools in Vinnytsia, Lviv, Uman, Khmelnytskyi, Ivano-Frankivsk, and Sumy served as experimental facilities. According to the methodology of pedagogical research, the participants in the experiment (450 high school students, 87 teachers, 205 these students' parents) were divided into the experimental group (EG) and the control group (CG). The analysis of the experiment's results took into account the number of group participants, as well as sampling representativeness (225 high school students aged between 14 and 17 in each group – EG and CG).

The methodology involves developing needs and motives for creating projects, familiarizing high school students with the basics of project activities, the stages of creating projects, ways of implementing projects, project portfolios. This research considers any project as a complex pedagogical technique. In turn, it involves using such techniques as instruments for creating projects, namely, traditional instruments: paper instruments (books, journals), magnetic instruments (floppies, audio and video cassettes, CDs); modern instruments: electronic instruments (printers, scanners, computers, laptops, PDAs, e-books, flash drives,

telecommunications). The importance of tools of project activities can be especially underpinned by presentations which require the use of laptops, interactive whiteboard, media, CDs, flash drives. In the context of project activities, teachers act as consultants, who help to come up with ideas for the project, determine its goals, content and choose relevant tools for creating it.

Given the complexity of the research object, the authors of the paper have implemented a targeted complex programme “Developing Business Skills in High School Students”. This programme includes organization support (the study of local legal acts, curricula, syllabi and author’s programmes on specialized courses and electives; the organization of activities of temporary creative teams regarding the elaboration of local legal acts and concepts of the educational institution; the update of syllabi following the objectives of the institution; the conclusions into agreements with higher education institutions; the organization of psycho-pedagogical counselling for teachers; the compilation of periodicals and literary sources on the problem under study; the organization of staff meetings, pedagogical councils and meetings of methodical associations with teachers, conferences with parents); the legal framework (the issue of orders, decrees regarding the organization of experimental work; the development of regulations on project activities of pupils and other local acts for the organization of the experiment). The programme also involves the scientific and methodical support (the organization of scientific and practical seminars with the participation of university teachers, methodical services specialists, teaching staff from schools aimed at improving teacher competence; the participation in scientific and practical conferences on the problem under study; the elaboration of specialized courses for high school students formation “Business People: the Ways of Development”, “Project Activities in the Professional Development of Personality of High School Students”, specialized courses for teachers “Achieving Professionalism”, for parents “Family Education: the Development of Personality’s Living Space”, methodical guidelines for teachers and class leaders regarding the organization of students’ project activities). Besides, it envisages the provision of ICT facilities and the expansion of the school library fund.

The experimental programme also incorporates a course of lectures and seminars on the preparation of teachers for the experiment, including “The Philosophy of Education: Its Relevance and Prospects”, “Project Activities as a Mechanism of Self-Development and the Institute of Self-Realization of Participants in the Educational Process”, “Theory and Methods for Developing Business Skills in Students”, “Project Activities as an Important Aspect of Competency-Based Education of Students”,

“Conflict Management Strategies”, “Innovative Educational Technologies”. The most effective forms of such preparation are the following: training sessions on the secrets of effective pedagogy, teaching how to use information technologies and the creation of professional projects. These activities have helped to restore, systematize and update the scientific and methodical knowledge of teachers, to elaborate a unified conceptual framework and master the theoretical basis of the problem of developing high school students’ business skills and the necessary methodological tools of project activities. The scientific and methodological work in schools has been aimed at familiarizing teachers with the theoretical principles of the problem under study by involving them in methodical councils, seminars, methodical associations, creative workshops, conferences.

It is also essential to provide psycho-pedagogical support to parents, conduct individual consultations on the problems of young people’s education, explain them the importance of developing business skills in high school students, familiarize them with the scientific and pedagogical literature, pedagogical periodicals and encourage to participate in projects. Besides, parents, together with their children, organized practical exercises, business games, discussion and described their future professional life to develop their business skills. Such activities have encouraged high school students to participate in competitions, projects and coordinate their actions with teachers. The interaction between teachers and parents has fostered a climate of trust and friendliness as the most important factor in a collaborative educational process.

The organization of experimental work also included ascertaining, educational and test experiments. The following diagnostic methods were used to identify the development level of certain business skills: Bass’s method called “Determining a self-focus” needed to identify business focus (Istratova, & Eksakusto, 2005); Orlov’s method called “Striving for achievements” needed to identify a striving for success (Stolyarenko, 2005); Zagrebina et al. (2006)’s relevant tasks used to identify the level of key competencies; Johnson’s Creativity Questionnaire (1986); Syniavskiy & Fedoryshyn’s communication and organization skills methodology needed to assess respective skills (Istratova & Eksakusto, 2005); Rotter’s & Bazhina’s methods for studying the level of subjective locus of control needed to assess responsibility (Kirsheva & Ryabchikova, 1995); Schubert’s methods for identifying risk preparedness (Raygorodskiy, 2002); Spielberg & Khanin’s scale of reactive (situational) and personal anxiety needed to identify the level of self-control (Shalimova, 2006); tolerance index questionnaire (1986).

Methods for developing business skills in high school students are multi-faceted and include such components as goals, motivation, cognition, procedures and results. They also take into consideration different types of projects, specifics of their tools, as well as the need to complicate students' activities, given that the ninth grade (age of 14-15) covers pre-profile training and tenth and eleventh grades – profile training, which is pre-vocational training as a whole. Therefore, all projects were focused on preparing high school students for future professional activities.

The moral education of high school students is given a special place in the experiment. Therefore, the planned projects should meet the social interests of students, people and territories where they are expected to be implemented. High school students were taught to work with others on a partnership basis, engage in a constructive dialogue, respect human dignity, defend their rights and thoughts without violating others' rights.

The test experiment studied the changes in the level of EG and CG high school students' business skills in comparison with the first stage of the experiment, as well as processed and summarized the obtained results. In this regard, high school students were retested using the same diagnostic methods.

The results obtained from the verification of CG and EG homogeneity at the beginning of the experiment and the likelihood of coincidence or differences of their characteristics at the beginning and the end of the experiment by comparing empirical values of criteria with critical values were checked using the STATISTICA data analysis software system and the computer programme "Statistics in Pedagogy". The analysis of the obtained results involved calculating Student's t-test, which reveals the probability of difference of mean values in two samples, and the Mann-Whitney U test, which detects arbitrary pairwise differences in sample characteristics in the relationship scale.

The reliability of the obtained results is provided by methodological justification of the initial provisions, the accordance of research methods with the research aim and objectives, quantitative and qualitative analysis of the experimental data and the representativeness of the research sample.

## Results

The analysis of the results from the ascertaining experiment shows that a high level of business skills in EG is 15.7%, in CG – 17.0%; an average level of business skills in EG is 53.1%, in CG – 54.0%; a low level of business skills in EG is 31.2%, in CG – 29.0%.



**Table 1.** The summarized results of the ascertaining stage (%)

Levels of business skills	EG	CG
high	15.7	17.0
average	53.1	54.0
low	31.2	29.0

Table 1 shows that the levels of business qualities in EG and CG are almost the same at the beginning of the experiment. It indicates certain ineffectiveness in developing business skills at schools.

Thus, the authors of the research have almost practically proved the need to conduct the formative stage using a methodology that will help increase the effectiveness of developing business skills in high school students.

The analysis of the results from diagnosing the respondents in CG and EG reveals the following results: 28.5% of EG respondents and 18.3% of CG respondents are at a high level of business skills; 56.9% EG respondents and 54.6% of CG respondents are at an average level of business skills; 14.6% of EG respondents and 27.1% CG respondents are at a low level of business skills.

The dynamics of the results from ascertaining and test experiments are presented in Table. 2.

**Table 2.** The results of experimental work (%)

Level	EG		CG	
	initial	final	initial	final
high	15.7	28.5	17.0	18.3
average	53.1	56.9	54.0	54.6
low	31.2	14.6	29.0	27.1

The obtained results show that the number of high school students with a high level of business skills has increased by 12.8% in EG and only by 1.3 in CG. The number of high school students with an average level of business skills has increased by 3.8% in EG and by 0.6 in CG. Therefore, the comparison of EG and CG results proves the effectiveness of the proposed methodology for developing business skills in high school students using project activities.

In the ninth-grade, high school students start to realize the need to be a business person, as well as the need to develop business skills. In this regard, they were encouraged to discuss difficult life problems and discover ways to cope with them. The experiment shows that the process of discovering these ways should be consistent, varied, intellect-focused and take into account students' life experience. High school students' understanding of the need for well-developed business skills is enhanced due to such forms and methods as reading biographies of prominent businessmen from all over the world; role-playing situations; meetings with people who have succeeded in economic, entrepreneurial, pedagogical and other fields; visits to companies, enterprises, cultural and scientific institutions; certain business games ("How can one live within one's means?", "Starting a business", "Business communication", "Manager's working week"), conversations on such topics as "Is it difficult to be a businessman?", "How can one succeed in learning?", "Tell me about myself"; the "this is my opinion" student platform; participation in the youth forum of student organizations, an insight into business sites.

Particularly valuable are those situations which teach high school students to analyze their behaviour in a team. Indeed, it much contributes to their personal growth, reflection and, most importantly, development of relevant business skills (axiological situations, reflexive situations, project situations, creative situations, training situations, drama situations). All of this can increase students' self-esteem and consolidate their knowledge about business skills.

Tenth and eleventh graders were offered to participate in training sessions on business activity aimed at developing high school students' business skills, as well as enrol on such author's specialized courses as "Business People: the Ways of Development", "Project Activities in the Professional Development of Personality of High School Students" which contain vital information about the ways of becoming a business person, opportunities to continue education and gain a profession, understand the essence and learn how to use tools of project activities. These specialized courses involved the use of such exercises as "Civilization", "Obstacles", "Negotiations", role-playing situations and helped to increase high school students' tolerance, business focus and willingness to risk since before the experiment these qualities were at a low level.

During the experimental work, high school students familiarized themselves with the basics of project activities, algorithms of creating projects, tools of project activities and different types of projects. Such work made it possible to include each student in project activities and help them

to realize different positions of members of the group (from performers to organizers). Each student participated in the creation and implementation of five projects in the following order:

Step 1 (Grade 9) – the individual project “My Way to Business Success”;

Step 2 (Grade 10) – a practical group project within student self-government or a creative group project within clubs of interest;

Step 3 (Grade 10) – an educational group project on a specific area;

Step 4 (Grade 11) – a social group project within the school of self-education (as part of class hours);

Step 5 (Grade 11) – the multimedia project “The Most Successful Business People in the World” with the involvement of parents.

Information projects include gathering information, analyzing and summarizing facts. A presentation is an integral part of such projects and should have the following structure: goals, relevance, data and results. Practical projects are characterized by clear results of participants’ activities, which meet their social interests, have a clear structure, scenario and roles. Creative projects depend on the imagination of a project creator, demonstrate creative skills of participants (a film or event scenario, a newspaper layout). Educational projects are understood as independent activities aimed at developing students’ subject-specific skills and creative self-realization. Social projects are focused on the interests of society and people. Multimedia projects act as joint educational and creative activities of students using multimedia technologies.

The paper shows that such processes as creation and implementation of projects have helped high school students to master both modern and traditional tools of project activities. Given that a presentation is an integral part of information projects, this project required the use of electronic tools (computers, flash drives, Microsoft Office PowerPoint, Microsoft Office Publisher, Adobe Photoshop, Fine Reader and scanners). Traditional paper and magnetic instruments were used in the process of creating practical, creative and social projects. Multimedia project required the use of traditional (paper, magnetic) and modern (Macromedia Flash, 3ds Max, PowerPoint) instruments.

It must be noted that some of the tools of project activities turned out to be outdated in the course of the experiment. This was especially true of magnetic instruments (audio and floppy disks). However, flash drives, laptops and telecommunications proved relevant in the process of creating

projects. It was important to teach high school students how to analyze, organize and prevent plagiarism when using the Internet.

The main achievements of project creation were reflected in the portfolio of project activities, which is the organizer of students' work, the place of gathering materials, the tool of information analysis, the tool of self-assessment and reflection. At the same time, it serves as feedback and assessment tools for teachers. Such a portfolio consists of a business card of the project, the collector, work material, as well as students' main achievements.

The obtained results confirm the statistical significance of the difference of all indicators in CG and EG, which proves their reliability.

## Discussion

**The scientific value of the obtained results** is as follows: for the first time, the methodology for developing business skills in high schools students using project activities has been scientifically justified; the essence and structure of the individuals' business skills developed based on the cultivation of such spheres of individuality, namely, the motivational sphere (striving for success, business focus), the cognitive sphere (competency, creativity), the volitional sphere (responsibility, organizational skills, willingness to take risks), the emotional sphere (tolerance, sociability, self-control), have been specified; a portrait of a high school student as a business person has been developed; the criteria, indicators and development levels of high school students' business skills have been revealed; the means of project activities have been determined; methods and forms for enhancing teachers' professional skills through training sessions, the specialized course and creating projects, as well as parents' pedagogical competency through pedagogical education, pedagogical and psychological counselling on the problem of developing high school students' business skills, have been improved; the topics of different types of projects for developing business skills in high school students have been outlined; the views on creating projects during lessons, electives, educational hours, pupil council activities, group work, involving parents in joint project activities with their children, as well as using project activities for different types of projects, have been further developed.

The practical value of the obtained results lies in implementing the targeted comprehensive programme "Developing Business Skills in High School Students through Project Activities" in the educational process, which is the result of management modernization through a programme-

target approach; developing and validating the programmes of such specialized courses as “A Man of Business: the Ways of Development”, “Project Activities in Professional Development of the High School Student’s Personality” and manuals for teaching these courses; programmes and manuals for teachers “The Top of Professionalism” and for parents “Family Education: the Development of the Individual’s Living Space”; methodical recommendations for teachers on the organization of project activities; methodical recommendations “Developing Business Skills in High School Students: from Theory to Practice” for specialists in graduate teacher education, methodologists, heads of educational institutions, teachers, psychologists, educators, organizers of extracurricular activities; methods for developing business skills in high school students (conversations and dialogues; discussions on business, professional, life problems; role-playing; group and individual exercises; business games; analysis of biographies of prominent business people from all over the world; acquainting with mass media; meetings with entrepreneurs). Theoretical provisions and practical results presented in the research can be used by heads of secondary schools, teachers, as well as university teachers and students.

## **Conclusions**

Given the current socio-economic changes, as well as the development of market relationships, it is essential to educate a highly moral and competitive person with well-developed business skills. Early youth is the most favourable period in the purposeful development of business skills. If high school students have business qualities, they can take their place in the social structure of society, satisfy their needs in any activity, including the need for professional self-realization. A retrospective analysis of developing business skills in high school students is based on considerable achievements of ancient and modern science on the education of business people and should take into account modern technologies and forms of organization of education. These technologies also include project activities since they ensure students’ active involvement in solving their life and professional tasks, helps them to gain the necessary professional experience and promotes their personal development.

The paper proves that there are traditional instruments (paper ones such as books and magazines; magnetic ones such as audio and video cassettes, CDs) and modern instruments (electronic ones such as printers, scanners, laptops, computers, flash drives, telecommunications). However, the emergence of advanced tools of project activities necessitates

appropriate training of teachers, high school students, parents, as well as promotes constant awareness of using these tools.

A theoretical analysis shows that business skills are generalized, specific personality traits that characterize personal potential in social, public, political and industrial fields and, at the same time, determine the success of any activity as a whole. The analysis of scientific sources, as well as a survey of the respondents, proves that the most important business skills are competency, responsibility, tolerance, sociability, creativity, organizational skills, striving for success, business focus, self-control and willingness to take risks. These skills are a complex integrated entity, which indicate the development of motivational, cognitive, volitional and emotional spheres of the individual.

The criteria for assessing the level of business skills in high school students are as follows: the motivational criterion (the level of business focus; the level of striving for success); the cognitive criterion (the level of high school students' competency; the level of their readiness to perform creative tasks); the activity-related criterion (the level of high school students' readiness to take risks); the emotional criterion (the level of self-control; the level of ability to interact in different social groups; the level of understanding tolerance in high school and especially the fact of adhering to it). These criteria and their indicators make it possible not only to define high school students as business people but also to assess the level of their development (high, average, low).

The methodology for developing business skills in high school students takes into account age characteristics of high school students, the specifics of their education in general education schools, the involvement of teachers, parents, the public and, finally, the study of specialized courses. The results of experimental work show that the implementation of the methodology for developing business skills in high school students using project activities has increased the development level of business skills.

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her city at a local secondary school and cooperated with teachers and parents of high school pupils.

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