

SECONDARY SCHOOL STUDENTS RESEARCH



REALIZATION OF HANDS ON LEARNING IN SCHOOLS



IMPRESSUM

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What were we supposed to learn
but we hadn't?

RESEARCH ON THE REALIZATION OF HANDS ON LEARNING IN SECONDARY SCHOOLS IN BOSNIA AND HERZEGOVINA

p a r t i c i p a t o r y a c t i o n r e s e a r c h

march, 2018.

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ABBREVIATIONS

ASuBiH	Association of Secondary School Students in Bosnia and Herzegovina
BiH	Bosnia and Herzegovina
EUROSTAT	Statistics office of the European Union
FBiH	Federation of Bosnia and Herzegovina
SG	Support group
M&E	Monitoring and evaluation
NGO	Non-governmental organization
CSO	Civil Society Organization
OECD	The Organisation for Economic Co-operation and Development
PAR	Participatory Action Resesarch
SSSRG	Secondary school student research group
RS	Republic of Srpska
BD	Brčko District
KS	Canton Sarajevo
ZDK	Zenica-doboj canton
TK	Tuzla Canton
USK	Una-Sana Canton
BPK	Bosna-Podrinje Canton
HNK	Herzegovina-Neretva Canton
HBŽ/ Kanton 10	Herzegovina Canton / Canton 10

SUMMARY

Association of Secondary School Students in Bosnia and Herzegovina (ASuBiH in further text) with the support of the Schuler Helfen Leben Foundation (SHL) and the Open Society Fund BiH (OSF BiH) implemented a research on the realization of hands on learning in secondary schools in Banja Luka, Brčko District, Gradačac, Istočno Sarajevo, Mostar and Sarajevo. The aim of this project was to research the organization and the ways of realization of hands on learning in secondary schools, with a special focus on the experiences of students and their participation in the organization and the realization of the aforementioned hands on learning

The research was conducted using the participatory action research methodology, where the focus was on active participation of secondary school students in all phases of the research, leaning on their experiences as a group who actively participates in the realization of hands on learning in their schools. Both qualitative and quantitative research methods were used, therefore an analysis of the documents which are connected to the ways of organization and realization of hands on learning in secondary schools was conducted, so that the facts on the different dimensions of this problem could be determined.

This research was led by facilitators from ASuBiH, and conducted by secondary school student research groups (SSSRG in the further text), in coordination with support groups (SG in the further text): Secondary school student research groups, as well as the support group were formed in every local community where the research was conducted. The training of the facilitators for applying this methodology was held by Mrs. Dženana Šabić Hamidović, an independent consultant.

This research was conducted by secondary school students and the intent was not to answer all the questions in this area, but to give a chance to young people who are directly concerned with this way of education, to point out what is lacking in this way of education, from their perspective and of course, to give their contribution. This was the first time for most of the participants of this research to work on a complex research, so this research experiment should be viewed in that way.

The report is based on the findings and recommendations of secondary school student research groups.

The basic findings of this research, as well as recommendations refer to:

The expertise and the ways of organization of classes where hands on learning is applied in and outside of schools

Equipment of secondary schools and the availability of adequate equipment and literature

Training of the professors for using modern technology

This report has an aim to contribute to a better understanding of ways of organization and realization of hands on learning in secondary schools all across Bosnia and Herzegovina, but at the same time to offer a proposal for future researches of this important question, as well as proposals to take action which could be implemented in secondary schools and improve the ways of organization and realization of hands on learning.



Association of Secondary School Students in Bosnia and Herzegovina is an organization which, through its activities and projects, advocates for improving the status of secondary school students in Bosnia and Herzegovina, with a goal to create better conditions for education in the country, as well as connect secondary school student.

ASuBiH was founded on the 4th of November, 2007 with a support of over 250 secondary school students from the entirety of Bosnia and Herzegovina. The initiative for founding this organization was also started by the German foundation Schuler Helfen Leben (SHL – Students Help Life) who is also a donator to ASuBiH. For a long time now, ASuBiH represent secondary school students and advocates the needs for solving problems and supporting ideas of secondary school students all across the country.

The organization currently counts over 1200 members, with over 58 local teams on the territory of the entire Bosnia and Herzegovina. With our work we want to increase the involvement of secondary school students in the decision making processes which improve their status in the society through meeting with rights of the secondary school students, as well as advocating for the ideas of every secondary school student in Bosnia and Herzegovina which contributes to the improvement of their life in the community.

Reasons for choosing this methodology

ASuBiH chose the participatory action research (PAR) methodology to ensure three important things:

- *participatory action research - students' participations in the organization and realization of classes where hands on learning is applied in secondary schools*
- *participation of students in every research phase - through SSSRG meetings and activities participation. Activities have been focused on collecting information.*
- *participation of people who are relevant to the research in every phase of the research - through support group meetings but also through the participation of SSSRG's activities. In this case, the main purpose of these activities was to question the people relevant to the research about their experiences and practice related to organization and realization of hands on learning in secondary schools.*

Participatory action research methodology endeavors to identify positive social changes in the community. The aim of participatory action research is not to make one group (which is stronger and more active) the leader of the research and the problem solver of another group (which is less strong or active). On the contrary, the aim is to include groups which are directly affected by the problem which is researched and it is a way for them to take measures for initiating a social change in their communities, schools, etc. Participatory action research enables social recognition of objective knowledge which is hardly possible to achieve through other research methodologies (Fals-Borda and Rahman, 1991), which it is also one of the main reasons for choosing this methodology.

Participatory action researches (PAR) are always implemented through group (team) work, or more specifically through PAR researching groups. These groups allow active participation of „research subjects/objects“ in all processes of the research. Members of such groups are not research subjects, they are reasearchers (Researchers - associates; Heron, 1996). Their experiences are considered to be expert knowledge which is important for researching tasks, while others (ASuBiH in this case) become facilitators of researching process.

For the purpose of this research there were formed two types of groups; secondary school students' researching groups (SSSRG) and support groups (SG).

- **SECONDARY SCHOOL STUDENTS' RESEARCHING GROUPS (SSSRG) – are composed of secondary school students from aforementioned communities at the ages of 14-19. Every group consisted of 15-25 members that have been involved in 10 meetings during research. The invitation was open for all secondary school students. The members of the groups were from different years, from the first through the final year, which was done to ensure different experiences and perceptions of this topic.**
- **SUPPORT GROUPS (SG) – are formed to ensure an integral approach on research through participation of all people relevant to this topic. Support groups worked as focus groups to secondary school students' research groups for the purpose of obtaining feedback on analyzed topics related to the organization and realization of hands on learning in secondary schools. SG counted around 20 members, and they met twice during the research period. Support groups included teachers, school administration, representatives of communities, ministries of education, companies and civil society representatives.**

Methods of collecting data and analysis

The collection of data is organised:

- *at meetings of secondary school research groups (between members of the groups)*
- *outside meetings of secondary school research groups (from other students and teachers who create and attend hands on learning classes in secondary schools)*

Inside of secondary school research groups, data collection was organized through meetings of SSSRG, and PAR research groups were used for coordination of the discussion. (see Chapter 1)

Outside the meetings of secondary school research groups, data collection was done by the members of SSSRG. It was necessary to hear different opinions and collect information about documents which control jurisdiction and roles in the process of organization and realization of hands on classes in secondary schools, just like the information coming from those who organize hands on classes in secondary schools. SSSRG have done structured interviews with professors of hands on schooling. 32 professors have taken part in the interviews.

At the same time, there has been a survey for the secondary school students. The survey was created to collect opinions of a larger number of students about the processes of realization of hands on schooling in their schools. The survey was done in 15 local communities and a total of 5.049 secondary school students took part.

Participants in the research – the choice of locations and facilitators of secondary school research groups

Communities in which the research has been done are: Banja Luka, Brčko, Gradačac, Istočno Sarajevo, Mostar and Sarajevo. They were chosen based on the activities that have been done by ASuBiH, and on the basis of capacity and human resources of ASuBiH for making this kind of research in those communities. These communities are also the administrative centers of their regions, except for Gradačac where the research had been made because it was not possible to form a secondary school research group in Tuzla.

(The PAR methods used during this research were adapted from these materials: A manual developed at the Cornell University for the UNICEF project „Right to know“, 2003; Meg Gawler, ARTEMIS Services for UNICEF Regional Office for CEE/CIS and the Bal-tics (2004) Engaging Young People in Participatory Evaluation: Some useful tools. Prevesin-Moens: Artemis Services, from www.artemis-services.com; Commonwealth Secretariat (2005) Four tools for adolescent and youth participation. London: Commonwealth Secretariat.)

The effort in all of the locations was supported by two facilitators, which were chosen by ASuBiH by the following criteria:

- Earlier experience of facilitating group work (for example in interactive programs of education);
- Earlier research experience (optional, for one member)
- **Earlier experience in working with groups of kids and/or young people (optional, for one member);**
- **Membership in the school or community where the research is taking place (that they are school students and/or living in the community)**

In order for the facilitators to get to know PAR methodology, an ASuBiH training program has been made for the members that took part as leaders during the process – facilitators during the research in the local communities. The training had took place on the 7th through the 9th of April of 2017. in Kladanj. People who participated include 12 facilitators, the project team, and the trainer that lead the facilitator training. After this, facilitators have met again, on the 8th through the 9th of September 2017. in Tuzla, to exchange initial experiences in the process of forming secondary school research groups, after three of the first meetings have been done in all of the communities.

Including other people in the research

On the level of local communities, the main people in the research include the following members of chosen communities (municipalities):

- Secondary school students,
- Teachers and other representatives of secondary schools which were included in the research,
- Representatives of the municipalities,
- Representatives of government and nongovernment organizations

The representatives of these groups of people were involved and directed the whole research process (from agreements on the topics of research, through collecting and analysis of data, to watching over findings and recommendations). Beside that, the secondary school students, and all of the other people involved in the research, were in charge of contacting their peers and other people whose knowledge and experience may come useful for the research realization.

On the levels of the canton, the entity and the state the research included the following:

- The Federal Ministry of education and science
- The Ministry of education and culture of the Republic of Srpska
- Ministry of education, science and youth of the Sarajevo Canton
- Ministry of education, science, culture and sport of the Zenica-Doboj Canton
- Ministry of education, science, culture and sport of the Herzegovina-Neretva Canton
- Ministry of education, science and culture of the Una-Sana Canton
- The department of education of the Brčko District Government
- Ministry of science, education, culture and sport of the Herzegbosnia Canton
- Ministry of education of the Bosnian-Podrinje Canton

Choosing the topic and the and focus of the research

With the experience that ASuBiH has with working with secondary school students shows that the topics that deal with the ways of organization and realization of hands on schooling in secondary schools are really important for secondary school students and that those topics are the most discussed ones at meetings. That is why this is one of the first

topics that secondary school students, members of ASuBiH, decided to research so they could try to offer some possible solutions in their schools, but also to collect some suggestions from these six connected local communities that could also be applied in other local communities in Bosnia and Herzegovina.

The main goal of the research was to look into ways of organization and realization of hands on schooling in secondary schools in six chosen locations, with a special focus on experience and participation of students in these processes. We took our research tasks out of this main goal, meaning that every secondary school student research group chose their research focus, and after the original analysis of this goal in their local community. After that they researched possible ways of organization and realization of practical classes in secondary schools, and based on them, chose the focus that members of SSSRG showed the most interest in and recognized them as issues that they are dealing with in the schools they go to.

Based on the aforementioned statements, these focuses of research in local communities were defined:

- SSSRG Banja Luka chose the topic “ratio of theoretical and classes where hands on learning is applied in curriculum in secondary schools”
- SSSRG District Brčko and Gradačac were focused on “equipment of classrooms for hands on schooling in secondary schools”
- SSSRG Istočno Sarajevo researched “secondary school cooperatives, as an assumption for upgrading the quality of realization practical classes that is not much represented in systems of secondary school education “
- SSSRG Mostar researched “schools cooperation with companies in the field of realizing classes where hands on learning is applied.”
- SSSRG Sarajevo asked a question „are there there plans for hands on schooling and are they applied in Sarajevo canton?”

The results of each topic are presented through basic analysis and recommendations of this research.

Topic of the research

Secondary school education, according to the General law about primary and secondary education in Bosnia and Herzegovina, is available in regard to the success in primary school, personal preference and abilities. Secondary education is not obligatory according the laws about secondary school education. It lasts three or four years, depending on the chosen school.

General schools

- *Gymnasium (teacher's plan and program is being performed in the span of four years, and by finishing it the the student is getting secondary school qualifications and the possibility of further education on a higher level)*
- *Art school (in art schools, the time span of four years, students are educated by the general educational program and by a program for vocational education for music, arts, ballet, which is decided by the type of teacher's plan and program, in a four year long duration, and by finishing it the student is getting secondary school qualifications and a possibility for further education on a higher educational level)*
- *Religious school (teachers plan and program in being held in a four year long period, by which finishing it the student is getting secondary school qualifications and a possibility for further education)*

Vocational schools

- *Technical school*
- *Economical school*
- *Medical school*
- *And other professional schools, which are decided by the type of teacher's plan and program, in duration of three years, where when the program is finished, students get secondary school qualifications without an access to higher education, and there are also schools which last for four years where when the students finishe the program, they get a secondary school qualifications and a possibility of further education on a higher educational level*

Institutional image of the educational sector in Bosnia and Herzegovina is a reflection of the country's arrangement, defined by the Constitution of BiH, constitutions of the entities and cantons, Statute of Brcko District and where the responsibilities in the area of education are defined.

Republic of Srpska, ten cantons in Federation of BiH and Brčko District have full and undivided responsibility in the area of education. This way, there are exactly 13 ministries of education, while on there is a Ministry of civil jobs, exists on a national level which has an coordinating role and a role of an advisor in the area of education in their mandate.

Institucija srednjeg stručnog obrazovanja i obuke je srednja škola organizirana kao gimnazija, srednja tehnička i stručna škola, umjetnička škola, škole posebne

Secondary school education and training are an integral part of the education system in BiH which provides acquisition of skills and knowledge from different areas of work and the basics of the continuous training with the goal of active involvement in the process of work or furthering education, and it requires different kinds and shapes of upbringing and education, training and perfecting through continuous, regular and irregular education and doing hands on work, and it also includes professional training of children and adults.

The institution of secondary professional education and training is a secondary school organized just like gymnasiums, secondary technical and professional schools, art schools, and schools made for special intentions and other kinds of school that fulfill conditions for doing activities of education, with appropriate laws in BiH in which activities of secondary education are detailed (school in further text).

When we talk about hands on schooling, a big problem is that we do not have specially created legal acts on ways of organization and the realization of hands on schooling, therefore these questions are regulated by laws on secondary school education depending of the place of application. While researching and then, afterwards, writing this report the research teams did not come to other analyses and reports that could describe the ways of organization and realization of hands on schooling in secondary schools in BiH.

The field of vocational education, and the issue of organizing hands on schooling of students from the age of 14 to 19 in companies is insufficiently and inadequately regulated by analyzed regulations. Namely, the General Law on secondary education and the training in BiH regulates the subject matter by establishing the obligation of the responsible educational institutions to regulate the issue of hands on learning and the work of students in workshops for that same hands on schooling and in the workshops of other legal persons on the basis of a contract or cooperation agreement. On the other hand, responsible educational institutions in the FBiH, RS and BD BiH, the subject matter was regulated by a law on secondary education. One of the key shortcomings of legislative regulation in this area is the fact that the authorities did not recognize the need for vocational education to be a separate legal regulation.

The majority of cantonal laws on secondary education and upbringing envisage the possibility to conduct classes where hands on learning is applied and ferial practices in enterprises, but the regulation of the relationship between the people involved in the realization of this type of teaching leaves autonomy to companies and schools. The situation is identical in RS, where there is also a possibility of doing applied hands on learning classes and professional practices in cooperation with enterprises, without defining at how this cooperation is achieved. In the FBiH and BD BiH the relevant regulations do not regulate the question of the basics of applied hands on learning. Furthermore, no legal acts were enacted which would regulate the issue of organizing hands on schooling, and whose enactment is envisaged analysed by the Laws on Secondary Education of the Croatian Criminal Law, the Criminal Code and the RS Law.

Laws that regulate secondary education in KS, USK, ZDK, BPK, K10 and TK foresee that the company where the hands on schooling is organized students must meet the requirements regarding the appropriate equipment, technical and technological funds and other appropriate conditions in accordance with the school curriculum. This issue is not regulated by the regulations of other cantons in the FBiH, nor in RS regulations or the BD BiH.

Also, the obligation to insure secondary school students from consequences from potential accidents during schooling is not issued by any legal regulation, and neither is the obligation to insure students who take the applied hands on learning classes. Meaning that the insurance against the consequences of an accident does not constitute compulsory insurance, but it represents contractual insurance. We can conclude that the students will be insured during the time of their regular schooling if their parents/guardians agreed to this type of insurance and paid a certain amount of annual fee.

In this kind of situation, employers also fear injuries at work. Secondary school students state that it would be much easier for businesses to take on students for hands on learning classes if they had paid insurance costs at the workplace where the training is carried out. Insurance of all students in practical classes would be an additional cost for the company.

When it comes to giving grades from these classes in the Bosnian-Podrinje Canton, people

who are in charge of giving grades to students from classes where hands on learning is applied in enterprises, are teachers who follow students work in accordance with the curriculum. In the Tuzla Canton for grading students, the coordinator of applied classes for hands on learning is in charge, not stating whether that is a teacher or a worker who is employed by the company. In Zenica - Dobož Canton, grading of students in these classes is carried out by a company employee where the classes are held in cooperation with the co-ordinator of practical teaching, who is employed at schools. In Posavina Canton the success of students in applied hands on learning classes is monitored by evaluating each practical exercise and control exam. It is not specified whether the grading is carried out by an authorized worker of the company in which the training is being held or a competent school institution.

Considering the fact that holding hands on learning classes in enterprises subjects to signing a contract between the school and the enterprises themselves, it follows that it is a contract whose content is issued by certain cantonal secondary education laws. Namely, laws on secondary education KS, ZDK, BPK, TK and K10 envisage the following as mandatory elements of the relevant contract: conditions, forms, methods and procedures for carrying out the hands on schooling, and exercising professional supervision over the performance of hands on schooling, whereby the laws in KS and USK additionally envisage the obligation of contracting parties to ensure the safety of students during their practice in the contract.

Some cantonal secondary education laws use the term employer for third parties where students do their hands on learning classes, which can cause confusion in the view the status of students during the contractual regulation of practical teaching of these people, which would also be contrary to the provisions of the current labor laws.

The Law on Secondary Education of the Sarajevo Canton defines “Creating a quality education for students to ensure the acquisition of general education and professional competences, they are trained for life and work in a changing socio-cultural context, taking into account the requirements of the labor market, modern information and communication technologies and scientific knowledge and achievements“ as one of its goals.

The Secondary Education Act of Canton Sarajevo also implies a reform of the current educational system to the dual system. In a conversation with the representative of the Ministry of Education, Science and Youth of the Sarajevo Canton it was noted that the process of changing the system has been started, and that interviews with employers are planned to start from the next school year, 2018/2019. It is planned to switch to the dual education system.

Dual education gives priority to practical work in enterprises over theoretical knowledge and has been applied in Germany, Austria and Switzerland for a vast amount of time. The advantage of this kind of performance of applied hands on learning is the work in companies where it is possible to secure a certain fee or a student scholarship by the employer.

RESEARCH SAMPLE

The main part of the research was conducted through regular meetings of secondary school student research group, and the total number of students who were involved in the work of the SSSRG in the mentioned six locations amounted to a total of 142 (62 M / 80 F) secondary school students.

In addition to the members of the SSSRG, the members directly participated in the support group of the research, whose number in six local communities was 35 (15 M / 20 F) members.

Indirectly, through participation in surveys, the research included an additional 5,049 (2,317 M / 2,660 F) secondary school students in 15 locations in Banja Luka, Bijeljina, Brčko District, Cazin, Doboj, Goražde, Istočno Sarajevo, Jablanica, Mostar, Sarajevo, Srebrenica, Tešanj, Tomislavgrad, Trebinje and Zenica. The surveying was conducted in order to get data on the attitude, thoughts, opinions and experiences of students in secondary schools on how to organize and realize hands on schooling in their schools, and all of them with the aim of giving recommendations for realization of the next research and activities in this area.

Tabela 1. Uzorak istraživanja

Lokacija	Broj učesnika SIG			Broj učesnika GP
	M	Ž	Ukupno	
Banja Luka	11	9	20	6
Brčko	7	15	22	5
Gradačac	15	15	30	7
Istočno Sarajevo	9	13	22	0
Mostar	9	18	27	12
Sarajevo	11	10	21	5
Ukupno	62	80	142	35
Ukupno svi:			177	

ORGANIZATION AND DURATION OF THE RESEARCH

Limitations of the research

The main limit of this research is the way of selecting locations as well as the way of selecting secondary school students who took part in meetings of the secondary school student research group. The reasons for this lies in the fact that the selection of locations and the selection of members of the SSSRG made in relation to the resources that ASuBiH has in local communities. As a consequence it was not possible to conduct a survey in the area of Tuzla because it showed that the resources that ASuBiH had in the local teams in Tuzla were not sufficient to gather a secondary school students research group and start the research. Therefore, the research was carried out in the municipality of Gradačac, with a considerable delay and a shortened time period for the realization of the research. On the other hand, the number of selected local communities can not be representative in order to talk about the situation in all of Bosnia and Herzegovina in the field of hands on learning, and it is therefore necessary to do additional research in larger numbers locations in order to get a more complete picture and a wider dimension of the problems that are present.

The second limitation concerned the selection of the time period for the realization of the research, since the SSSRG started with the research in the period from June to July if 2017 when summer vacations began, meaning that three months were lost for the realization of the research, which has slowed down the dynamics of the research.

The third limitation referred to the number of secondary schools in the selected locations that accepted the partnership for the participation of students who attend their schools in the SSSRG meeting. In addition to the fact that ASuBiH had all necessary permissions from the competent ministries of Education for the realization of the research there was still a number of schools that did not agree that their students take part or that they participate in the research through membership in the support groups

Findings of research

The main findings of the research were formed within the topics that are related to the main goal of the research, which are defined as follows:

- *competencies and ways of organizing classes where hands on learning is applied both within the school and outside school when classes are organized in cooperation with third parties,*
- *equipment of classrooms and the availability of adequate equipment and literature for conducting classes where hands on learning is applied in secondary schools, and*
- *training of teachers for the usage of modern technologies in order to improve ways performing practical lessons*

As explained earlier, each secondary school student research group chose a research topic. The results of their work are presented in the basic findings.

Competencies and ways of organizing lessons of hands on schooling inside and outside school

1. Cooperation between schools and private companies in the field of realization of hands on schooling

Secondary school student research groups put a special focus on researching the relationships between schools and private enterprises in the process of organization and realization of hands on schooling out of school. During work, information was collected which indicates that employers are currently not satisfied with profiles and qualifications of secondary school students in the private sector, which led to having some private companies run their own training programs for secondary school students who they eventually hire. Students, on the other hand, state that they are not satisfied with the current ways of organization and realization of hands on schooling in enterprises, because they often do not perform the jobs for which they are trained at school, meaning that their first working day and their first experience with the real job for which they were educated. The students gave examples where they made coffee, arranged mail, and similar things, instead of being given the opportunity to be involved in realizing the tasks that would be an integral part of the work that they should do when they finish secondary school.

“Our training at the clinics is not arranged and we do not do what we should do. We do things from our profession only when the professor is with us, but when we are by ourselves we just clean the floors.”

Participant, SSSRG Sarajevo

“Cooperation with companies is crucial for conducting good hands on schooling because schools are not sufficiently equipped. Students will acquire the necessary skills related to the subject while working in enterprises.”

Participant, SSSRG Brčko

“The expectations of employers are that the schools will provide them with fully educated and experienced students, but schools also expect the companies to teach students everything.”

Representative, Chamber of Commerce of the City of Mostar at the SG meeting

During one of the GP meetings, a representative of the Ministry of Education, Science, Culture and Sports of the HNŽ confirmed that schools expect companies to prepare students for future work at the future workplace. She said that a secondary school diploma is just a ticket to work at a company where students have yet to learn to do their job. On the other hand, students consider how they would be better as workers when they would have the opportunity to learn in three or four years of education to work and apply that acquired knowledge in a job for which they have been educated. This situation points to the need to create specific curricula that will apply in the realization of hands on schooling outside the school. Employers who took part in the work of support groups pointed out that a defined learning contract does not exist, which is the biggest problem that hinders the processes of an adequate organization and realization of hands on schooling.

“The problem is that we do not currently have a defined way of working in companies and therefore secondary school students clean floors or sit and watch.”

Representative, Chamber of Commerce of the City of Mostar.

“There are no contracts that provide students with practice, students only sign the Disclaimer of renouncing responsibility.”

Participant, SSSRG Brčko

When collecting data from relevant people involved, SSSRG found information which indicates that in some schools, although needed, there are is no hands on schooling out of school, and that such kind of practice is not planned in any way by the curriculum. During the research, information was collected that shows that there are cases where students sign only a particular document with the employer which guarantees that the student has completed a class of applied hands on learning they do not even have.

“The school does not ensure the implementation of hands on learning out of schools (in enterprises, institutions, etc.). Also, there are no planned and secured professional visits and excursions from these subjects.”

Professor, Mostar

“The NPP did not ensure visits and classes outside of the school, but as a professor in cooperation with the principal I organized visits.”

Professor, Mostar

Secondary school student research groups, who were researching this topic, pointed out the need to separate students' visits to private companies and their conduction of hands on schooling in them. During the survey, data was collected which indicates that schools use visits to private enterprises in order to replace the lack of organized realization of applied hands on classes, so that they could replace the lack of classes where hands on learning is applied with informative visits and familiarizing students with working methods, equipment used, and similar. The difference lies in the fact that students are visit the company for three hours at most, throughout which they do not have the opportunity to get to know the essence of the work, ways of organization of work in enterprises, production processes, relations with clients, etc.

“We do not practice there, but the students get to know the equipment we do not have otherwise at school in practice.”

Professor, Mostar

“Certainly it would not be bad to introduce going to the thematic business of interest for which students are taught, either in groups, or the entire class, so that students could see something they have learned in school in real life in an actual company. This would only be useful if the students were working there full time - all day, but the visits that last an hour or two would have no effect.”

Professor, Mostar

Researchers from SSSRG Mostar have come up with findings suggesting that one of the main problems lies in the absence of communication between schools and private companies, both of them transferring responsibilities to each other, and all of that damages the students. Also, the lack of communication between these two sectors leads to both being unhappy, and the initiatives for change remain unnoticed.

“There are many domestic companies for our profession, and they think the problem is in the school, that companies are interested in working with the students and providing hands on classes, but the school never allows it.”

Participant, SSSRG Mostar

Even when secondary school students show interest and make agreements outside of school, they say they encounter obstacles:

“In the textile school last year we only needed the signature of professors as responsible people for one inclusive fashion show we have been working on. We got ready, had sponsors, but nobody wanted to help us because they did not have any benefit from it and in the end that show was not organized.”

Participant, SIG Sarajevo

The question of the organization of hands on schooling in companies is largely reserved for the schools and the will of the companies. All of the involved in the realisation of hands on learning should be clearly met with their rights and obligations. Execution Contracts of hands on learning that are made do not contain all the essential elements, and do not regulate some key questions while the assessment of practical teaching in accordance with the laws is different in all cantons, and at the level of Republic of Srpska and Brčko District.

2. Ratio of theoretical and practical teaching

The distribution of hands on and theory classes is done through the curriculum. During the research it was concluded that the surveyed secondary school students have little knowledge of teaching plans and programs, as well as laws in the field of secondary education that concern the realisation of practical learning. RS Ministry of Education and Culture offers the possibility for everyone to look at the school curriculum on their web-

site, but this is not the case in other parts of Bosnia and Herzegovina. In some of the communities in which the research was conducted, the students had the opportunity to have insight into the school curriculum only in the school classrooms. Although the NPPs are somewhat accessible, and students should be familiar with them by management and / or teaching staff of the school, this is very rare in practice. Students think their teaching staff should present what will they learn in the following year, at the beginning of the year.

The Law on Secondary Education and Education of Republic of Srpska in Article 6 (e) defines the goals of secondary education as: developing an interest in theoretical knowledge as well as for their practical applicability “. The same law in the Article 32 further clarifies the mandatory forms of educational, theoretical, professional-theoretical, practical classes and exercises. Almost the same or similar situation exists in other laws on secondary education in Bosnia and Herzegovina. They all guarantee implementation of theoretical and practical teaching.

In addition, Article 14, paragraph d of the same law defines that public or private schools can only start working if the conditions for performing practical classes are provided for secondary vocational and technical schools. All of this should guarantee, not only organizing and implementing practical teaching, but also its quality. Experiences from local communities covered by this research point to a variety of issues when it comes to the implementation of practical teaching.

„During practical classes in the first and second grades of secondary school, we work on printing machines that we need to buy ourselves. We also buy the paper on which we type on.“

Participant, SIG Banja Luka

The results of the survey conducted among secondary school students in 15 local communities, indicate that 15% of respondents have experience of having practical classes not done by a planned schedule.

„When the practice class time comes, our professor lets us rest for one class, then gives us sketches, ie the graphic works we draw. Screws, tools, materials and parts that are used in my field, we are just sketching them. I have still not had any practical use out of this. ”

Participant, SIG Gradačac

The students' experience shows how they often have ordinary classes in classrooms but they have practical classes in other companies / public institutions. This type of mismatch causes additional time losses for students, but also causes additional financial costs for their parents. Special examples are linked to students of medical schools in the locations where the research has been conducted. With a goal of filling in the norm and in accordance with the curriculum and law it often happens that students spend time on practical lessons without specific tasks. The students emphasized that what often happens is that the plan and the program of theory and practical classes do not go hand in hand, and thus have difficulties in overcoming the curriculum.

“The students of the general course come in at 9:00 h, they get dressed in uniforms and wait for the professor who then sends them to different departments. Practical class duration is never clearly defined, but eleven o'clock is an informal average. A student performs 12 weeks of practice in the 3rd grade for the entire year. ”

Participant, SIG Banja Luka

“Practical classes are also being conducted for 3-4 weeks per semester, but it is a great load for the distribution of practical and theoretical lessons. The students do practical classes in the morning at UKC, and have classes in the afternoon at school. Other schools differently regulate applied hands on learning classes, and the students have applied hands on learning classes for an entire day. The decision to organize the tuition for the students of the Medical School like that is written in the curriculum, and is also a major factor of this practice of practical teaching and the number of subjects of theoretical teaching. To alleviate this problem, it is necessary to organize a meeting between the representatives of the medical profession and The Ministry of Education and Culture, and for the curriculum to be adapted to students. Medical schools are a specific example where practical lessons should not be left out, and there is a need for much more practical tuition in comparison of theoretical. Lack of practical tuition in some schools can be alleviated by training or work probation in a period of one month.”

Employee, University Clinical Center

Positive examples of adequate realization of practical teaching were recorded in schools which work according to the EU VET program and whose students were involved in the research.

“As far as our school and the EU VET program is concerned, there is a well-designed ratio between theoretical and classes where hands on learning is applied: 1st grade has one day of classes where hands on learning is applied, 2nd grade has two days of classes where hands on learning is applied, 3rd grade has 3 days of classes where hands on learning is applied in the craftsmen course, and when it comes to technicians 1st grade has four classes, 2nd grade has six classes, 3rd grade has 8 classes and the 4th grade has 10 classes.”

Professor, Sarajevo

The findings of the secondary school research groups also point to the problem of outdated curricula. Those NPPs, that were available to members of SSSRG, last time went through a process of changes and corrections in 2014., and some representatives of secondary schools who participated in the support group meetings also pointed out the passivity of the professors themselves in the process of developing new curricula.

“The curriculum is a problem which schools have been facing for a long time and the study material is outdated. The Ministry advocates the inclusion of as many professors as possible in the new curriculum design. However, three months after the curriculum commenting invitation none of the professors sign up, and it ends up with only one or no comments.”

Professor, Banja Luka

The Banja Luka secondary school research group has also handled the topic of evaluation of practical teaching, as a topic which is not directly in connection with the student assesment, but had a task to research the way the whole process of practical teaching is evaluated, from the plan to the student assesment itself.

While looking through the collected information it is visible thta most students has not

met with the term of evaluation. Even if they were included in the evaluation of the realization of certain classes and subjects, they usually emt with surveys where they anonymously answered questions where they had a chance to leave comments

Members of the SSSRG Banja Luka agreed that the students in those cases mostly left positive comments, or those comments have not been connected with the realization of hands on learning. On of the different ways of evaluation of these subjects where hands on learning is applied is the „D Day“ which is held in Banjaluka which is an open conversation of professors and students at the „round table“ where students talk about their issues with professors and together they come to a conclusion and potential solutions.

“One of the ways of evaluation of classes where hands on learning is applied is a work diary in a form of a report which is then given to the coordinator of those classes. The coordinator then send the report to the school administration. Comments and thoughts of students are also featured in the diary and it is ready for grading”

Participant of the SSSG, Banjaluka

When it comes to the question of the ratio of classes where hands on learning is applied and the theoretical classes members of the SSSRG who resesarched this topic came to a conclusion that funding has a big role in this as well. Every SSSRG agreed that the theoretical performance of subjects that have practical training as well is cheaper for both schools nad students, but that the classes where hands on learning is applied is a way for students to get an adequate experience in applying the content they have learnt. The need for equipment of the cabient for classes where hands on learning is applied in secondary schools is one of the key challenges in creating a better ratio of theoretical classes and classes where hands on learning is applied.

„The more modern the hands on schooling is, the secondary school students are better prepered for the work market. Education is a slow system, therefore changes cannot happen quickly. There are additional funding that is needed for equipping the classroom for classes where hands on learning is applied”

Pedagogue, Banja Luka

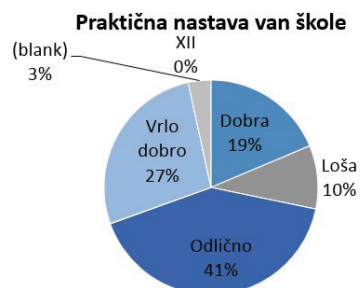
3. Inadequate and non existend curricula for the realization of hands on schooling.

During the research, secondary school student research group from Sarajevo came to a conclusion that one of the potential problems of the inadequate organization and realization of hands on schooling is the fact that the plans for the classes where hands on learning is applied, do not exist as independent documents. Through the research the SSSRG Sarajevo found information that professors consider the plan and program of work as a part of that, and students think that it is a part of the curriculum. The findings that SSSRG Sarajevo came across show the fact that students in most cases do not do practical work and have nothing to do with the machines and objects that are necessary for their vocation. Even the students who work in enterprises do not do any work for the job they are being educated for but do tasks that employees do not want to do, which coincides with the findings SSSRG Mostar and Brčko came across.

“The hands on learning classes we have at school are of high quality but the only problem that we currently deal with is that the classes we currently take outside of schools does not go along with the plan and program aka the theory we learn at school.”

Participant, SSSRG Sarajevo

The survey which was conducted between students from secondary schools in BiH show that students are usually satisfied with the organization of hands on schooling outside of school. The biggest amount of students rated the classes in enterprises with an excellent grade, over 41%, and 27% of surveyed students rated it with „very good“. The classes held outside of school was rated as „good“ from 19% of surveyed students, while 10% of them rated this way of schooling with „bad“.



Grafikon 7. Praktična nastava van škole

Besides the fact that students are generally pleased with the ways of organization and realization of hands on schooling outside of schools the research has shown that there is a need for certain segments of its realization to align, which is for example aligning the annual plan and program and the program of that specific subject with the program of the classes where there hands on learning is applied, where it is visible that the program does not exist. The information which was found during the work of the SSSRG Sarajevo are coinciding with the findings which were analysed in the part which talks about about ways of organization and realization of classes where hands on learning is applied in private enterprises outside of schools. SSSRG Sarajevo, finds that the reason to this is the fact that there are no clearly defined rights and obligations of students, or the obligations of employees in the enterprises or the institutions where the hands on schooling is realized.

The organization regarding students' stay during the classes where hands on learning is applied without the escort of the professors depends on the employees of the company or

the institution where the classes are being held, who do not have time nor are obliged to take care of students. The plan for the hands on schooling in secondary schools situated in BiH which would be agreed upon between schools and companies or institutions would give students the opportunity to spend their time in said companies learning things which are directly connected with the profession they are being educated for. Classes spent in school's workshop or at classes where hands on learning is applied should be clearly defined by the plan.

“In Austria there is a precise plan and program of what needs to be done in the company. If, by any chance, it happens that students go there to buy food for professors or walk around aimlessly that would be unsuccessful. If that is going to be on a higher level and if the company is going to have a planned out program which is coordinated with school that would be amazing.”

Professor, Sarajevo

“I have not noticed professors signing me in during the classes where hands on learning is applied. So can it even be considered NPP? Is it affected by the absence of the hands on schooling plan at schools? I believe that a plan for these classes would regulate this because the signing in as well as the evaluation of these classes would be clearly defined in the NPP.”

Participant, SSSRG Sarajevo

“According to the EU VET's work schedule there is width and flexibility while performing hands on schooling. The cooperation between enterprises and schools could be more specific...and them following the plan and the program of these classes, devoting themselves to the students alongside their mentor.”

Professor, Sarajevo

The development and the introduction of the plan and program of these classes which would be presented to the students in the beginning of each school year and which would be available to them at any time, according to participants of SSSRG Sarajevo, would lead to a greater interest in the subject. By working using the methods „ the tree of the problem” and „ the tree of the aims” researchers from the SSSRG Sarajevo have come to the conclusion that one of the causes of the current non satisfactory state of classes where hands on learning is applied, is that the students do not realize the possibility to influence the solving of the problem themselves. In order to eliminate this cause, students consider it necessary to ensure that students' are more informed and involmend in the process of making plans in the process of organizing and implementing the plan and the program.. Also, SSSRG Sarajevo believes that a greater awariness of the students regarding what's expected from them could lead to their bigger interest of becoming partners in improving the schooling processes.

“In orser for these causes to be removed it is crucial to act immediately so that we would have no more uninterested students who then become unqualified workers.”

Members of the SSSRG Sarajevo

“The understading of the NPP-a provides better communication and understanding between professors and students. We have a physics professor who introduces us to the plan ev-

ery year at the beginning so we know when are our tests are scheduled, and similar. And this makes us more understanding. We are also being asked if our professor has presented us the NPP.”

Member, SSSRG Sarajevo

Equipping classrooms and the availability of adequate equipment and literature

1. Classroom equipment for practical teaching

For the overall improvement of the quality of teaching process in schools, education systems around the world are advocating for the adaptation of working space in schools considering it one of the most important factors for work and learning during schooling. Spatial arrangement is important for the theoretical part of the teaching process, and for carrying out hands on learning it is crucial. The materials and equipment of the classroom are the basis for the work of professors and the only way that students during their schooling within the school come in the first real contact with the courses of study in theoretical classes, and apply what they mastered during theoretical lessons. That this was an important factor in the implementation of the curriculum and the process is shown by the fact that the SSSRG from three communities - Gradačac, Brčko District and Istočno Sarajevo recognized this topic as one of the most important for improving the way of organizing and implementing classes where hands on learning is applied in secondary schools in BiH. The members of the three SSSRG raised the question of whether the classrooms in which the practical lessons are being held are equipped or not, and what is the quality of the school equipment they have?

Secondary school students noted that a large number of secondary schools in local communities in Gradačac, Brčko District and Istočno Sarajevo do not have classrooms solely intended for practical teaching. During the research, they came to the conclusion that there are no separate classrooms for subjects in some schools, which creates a major problem in carrying out any practical work for students, and it makes it difficult for professors to transfer their knowledge. Sstudents in a large number of cases have the opportunity to see only the pictures of the materials that should be used, books or presentations prepared by the professors, and then sketch these materials as one form of practical lessons.

„I honestly think that after the end of the fourth grade we are not ready to work in companies, because we did not have classes where hands on learning is applied for four years. What needs to be done in hands on schooling, we write theoretically.“

Participant, SIG Istočno Sarajevo

The results of the survey conducted in 15 locations across Bosnia and Herzegovina indicate a different level of equipment of schools in our country. Namely, 75% of the students surveyed stated that they had equipped classrooms for conducting classes where hands on learning is applied in their schools, while 21% of them said that such classrooms do not exist in secondary schools that they attend.

During the research, students came to a conclusion that secondary schools that they and their peers attend are not equipped in accordance with the regulations for the performance of such classes. The classrooms where they attend classes where hands on learning is applied mostly own equipment that the school received as a donation, while the funds for the improvement of the classroom are invested by the competent institutions. The equipment at which secondary school students work does not give them much knowledge because it is obsolete, unprofitable and incompatible with the needs of the market, and the school's assets are not sufficiently engaged in imposing additional funds and equipment.

“We found materials in the attic from 1992, but that's also good because we do not have others.“

Teacher of practical teaching, Sarajevo

Existing classrooms for such classes, are already equipped but not abundant with large quantities of materials and equipment, and in a large number of registered cases what does exist is not available to students. High school students and professors during the research expressed great dissatisfaction over the inability to carry out practical lessons caused by these problems, since the quality of knowledge acquired in the school does not reach the level that they are expected to work in because they do not have the opportunity to work with appropriate materials and equipment.

“I think that work on outdated computers has no purpose. At school enrollment, we had a different insight and view of the direction I chose. Tools and materials are still available to us only in pictures.”

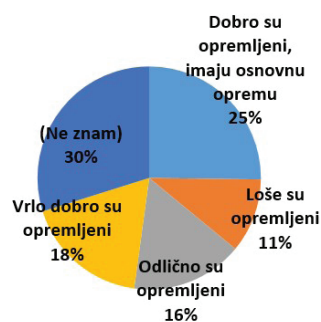
Participant, SIG Gradačac

“Looking at the expiration date of 90% of the chemicals we have, we can see that they are expired. Sodium chloride which is table salt, is something we can get at the price of 0.80 BAM, but we do not have it, so other students and I bring salt, oil, milk from home for a variety of experiments.”

Participant, SIG East Sarajevo

Earlier it was stated that 75% of the total number of surveyed students said that they have equipped classrooms for performing practical classes. Out of these, 25% think that classrooms are equipped with basic equipment, 18% of them think they are very well equipped, 16% believe they are well equipped, and 11% think that classrooms that exist in schools for such classes are poorly equipped, and a part of them did not answer the question about the equipment of the classroom in their schools.

Molimo te da ocijeniš opremljenost kabineta za izvođenje praktične nastave:



Grafikon 6. Kabineti za praktičnu nastavu

Inadequate equipment and the lack of equipment, according to the students who participated in the research, caused an irrational attitude towards the equipment during the teaching. Consumables are easily spoiled, quickly consumed, and because of this, schools are unable to have a constant quality of hands on schooling. According to students, schools are forced to take precautionary measures because any error can cost them the loss of already existing material, and therefore students do not have the ability to use and work on materials and equipment that the school owns, but only look when professors use it as a demonstration material.

„The students are negligent because they destroy equipment which is outdated anyway and in a phase of breaking down.”

Participant, SSSRG Brčko Distrikt

Data was found during the research which indicates that schools are not able to equip themselves with their own premises, since they do not have their permanent resources, but they get them from the competent institutions, which do not have the possibility to allocate larger funds for the improvement and purchase of necessary equipment and materials for schools. Students believe that some institutions do not invest enough funds to equip schools, and also consider that some of these institutions do not use enough resources such as project writing opportunities, potential donor funds, and the like to provide additional resources to equip schools.

„The Department of Education is insufficiently engaged in the level of school equipment because they ignored the requirement for the purchase of copiers last year and the professors and students had a big problem.“

Participant, SSSRG Brčko Distrikt

“The school owns classrooms where hands on schooling is conducted. Classrooms are not adequately equipped. Outdated materials and equipment should be changed. I think that if new computers or programs appear, then education about them would surely be good.”

Teacher, Banja Luka

Students and teachers believe that the insufficient amount of financial resources available to secondary schools is one of the main causes of the lack of practical problems of the practical teaching classroom.

„I went to the principal and I asked if there is any possibility that we could get some chemicals, to do some things that will be useful to us, for those who will work in the pharmacy. She tells me that we do not have the funds.“

Participant, SSSRG Istočno Sarajevo

It is important that schools have the ability to find the way to get additional resources themselves, and that they are not tied to the budget that is provided by ministries only. Relying solely on the support of the Ministry or the competent authority, the school administration does not react to the fact that not all secondary school students have access to equally high-quality practical training, which depends on the chosen vocational orientation, because the quality of the equipment of the classroom and working conditions differ from orientation to orientation.

The best indicator of the importance of education to the relevant institutions is the budget policy towards education and investment in education. According to the latest available data for the Municipality of Gradačac and Brčko Distrikt, the percentage of investment is not satisfactory, not only for equipping the classroom where hands on schooling is performed, but for the material and small inventory necessary for the smooth running of secondary education. On average, in the budget for 2017, secondary schools from the Brčko District had 2.92% of the total budget for secondary schools for procurement of materials, small inventory, equipment, and reconstruction and maintenance of space. Bearing in mind that a large part of these funds does not only include equipping the classroom where hands on schooling is performed, we can conclude that they are not enough to ensure that the quality is satisfactory. The same or similar situation occurs in secondary schools in Gradačac Municipality, where the only higher budget investment is noticeable in secondary vocational schools for an average of 4.2% of the total budget in the last three observed years (2016 - 2018). Insufficient engagement by competent authorities in seeking to find

alternative sources of funding through writing projects and communicating with potential donors deepens the whole problem, and is clearly visible through only 0.5% of the amount of secondary school budget that includes current and capital transfers and donations. Similar situation exists in the educational area of the Republic of Srpska, where, although the budget does not include analytical data for individual schools, the Ministry of Education and Culture allocates 0.82% of the budget for infrastructure, equipment, material and small inventory where this percentage applies to the needs of the institutions and the infrastructure of the ministry as a whole. From this we conclude that there are very low expenditures for equipping the high school classrooms because the mentioned percentage refers to all levels of education.

„In the budget of the Republic of Srpska, there are funds for consumables, tools for hands on schooling and materials for classrooms. We do not have classrooms at all.“

Participant, SSSRG Istočno Sarajevo

It is particularly important to point out that although the total budget of the relevant levels of government increased in the last year under review compared to the previous one, allocations for equipment and schools as a whole increased slightly, while the total capital expenditure in the total amount decreased, from which it can be concluded that the relevant levels of government do not direct resources and efforts to solve one of the very important causes of the whole problem.

During the research process, secondary school students emphasized that the administration of secondary schools was not sufficiently engaged in ensuring the necessary level of equipment for the practical teaching classroom.

It is recognized that, in a larger number of secondary schools, the equipment of the classroom where hands on schooling is performed depends on the allocations and investments of the relevant Ministries / Department of Education, and to a lesser extent, or not from secondary school assets. The efforts of the administration and professors of secondary schools in which practical lessons take place are often reflected in the efforts to utilize existing equipment, tools and other practical teaching tools in the best way possible by binding current literature and newer ways of learning with hands on schooling.

“The school does not regulate the purchase of equipment for carrying out classes where hands on learning is applied, but students must independently buy everything they need for those classes.”

Participant, SSSRG Brčko

“A small number of schools participate in various programs of NGOs and it is necessary that teachers and school principals do the right things for school equipment. Some people are not familiar with the new ways of equipping schools and it is necessary that they are shown all the possibilities at various events.“

Participant, SSSRG Istočno Sarajevo

Positive examples that have been explored by research groups indicate that some schools nevertheless invest in equipment for carrying out classes where hands on learning is applied, such as agricultural, food, veterinary schools and schools for other service activities, thus enabling students to derive their theoretical knowledge and applications.

“Our school has its own greenhouses and orchards, so the quality of materials is at a fairly solid level. The school also owns its workshop equipped with machines.”

Participant, SSSRG Banja Luka

Secondary school research groups in Gradačac, Brčko District and Istočno Sarajevo also examined the legal provisions that point to the obligation to invest and allocate funds to equip the classroom where hands on schooling is performed in secondary schools. Ministries / Departments and Pedagogical Institutes according to the research of secondary school students were proving to be insufficiently engaged institutions for improving the school infrastructure, because their acts did not define enough the provisions according to which this segment of education should be conducted, which, therefore, does not allow even minimal prerequisites for conducting practical lessons. Analysis of secondary education laws in cantons, districts and entities, as well as an analysis of the Pedagogical Standards indicate that in general these documents do not have a sufficiently represented topic the necessity of equipment in classrooms for performing practical lessons, and in most cases they are not defined in detail and are left for free and individual interpretations and implementation in practice.

“Conditions for practice must be provided. In the vocational-technical school an appropriate general-educational program, professional-theoretical-practical program which lasts for four years, is realized. We have to conduct hands on learning classes for four years and we do not have any.”

Participant, SSSRG Istočno Sarajevo

Gradačac found an example of insufficiently defined pedagogical standards and norms of the SSSRG in the Tuzla Canton, which has only one item in its document- 3. Teaching tools that address this topic, which says: “... In accordance with the provisions of the Law on Secondary School, the possession of teaching materials is a condition for the work of the school. In addition to multipurpose teaching materials (teaching aids in general use) that are used in the realization of curricula from various subjects, the Normative obligatory contains, in particular, teaching resources necessary for each teaching subject, such as: teaching materials, technical means necessary for its presentation, sets of teaching aids intended for conducting experiments, demonstration exercises, laboratory exercises, practical classes, and consumables, etc.

By this, no minimum equipment standard was required, which was necessary for conducting hands on schooling, and thus the schools were free to define individually the norms needed for the realization of hands on schooling.

Hands on schooling is a little different in Canton Sarajevo, where the Pedagogical standards and norms for secondary education define a framework for general subjects, but not for professional ones, which SSSRG consider to be much more necessary.

The Law on Primary and Secondary Education of the Brčko District in Article 26 (Assets), in paragraph (3), specifies: “In the establishment of secondary vocational schools, the founder is obliged to provide conditions for performing practical training and work, which can take place in school workshops for practical training and in working spaces that meet the minimum material and technical requirements of the Law on Primary and Secondary Education of the Brčko District in Article 26 (Means), and paragraph (3) specifies: “When establishing secondary vocational schools, the founding officer is obliged to provide conditions for carrying out practical training and work, which can take place in school workshops for practical training and in workspaces, which meet the minimum of material and technical requirements.

2. *Equipment in classrooms of practical teaching as a prerequisite for the establishment of secondary school cooperatives*

The cooperative is an independent, non-profit organization of students and unemployed youth (popular name of members: cooperatives) who associate themselves in the cooperative on the principles of solidarity, mutual assistance and volunteering, in order to obtain funds by personal work for satisfying personal and community needs, personal standards and the social position of young people, acquiring working habits and building a responsible attitude towards work.

The secondary school cooperative is a specially registered socially responsible person who has been established with the aim of doing professional tasks that are determined by the direction and profession of the school that establishes the cooperative. Cooperative members should be students of the school who would work with professional supervision and guidance by a professor who teaches hands on schooling.

The findings of the research indicated that few data from the competent institutions generally have a possibility of founding student companies within the secondary school as one of the ways of organizing and implementing practical classes in cooperatives. Secondary school students from Istočno Sarajevo, who were members of the research group, were the first contact and knowledge about starting a cooperative only had the beginning of the realization of this research.

„We are pleased that we had the opportunity to read available curricula and programs from the Ministry’s website, but also read the Law on Secondary Education (RS). It is precisely from this law that we learned a lot about the education system, which we do not have the opportunity to work in schools. The law clearly defines that schools can establish student cooperatives, but no one has ever told us that.“

Participant SSSRG Istočno Sarajevo

The survey of secondary school students showed that secondary school students did not have information about student cooperatives. Even 3,824 respondents (76%) responded negatively to the total of 5,049 students and students surveyed.



Grafikon 8. Srednjoškolske zadruge

The Law on Student and Student Cooperatives of the TK and the Rules on Student Cooperatives of the USK prescribe the ways in which secondary schools can start a cooperative within their institutions in order to realize practical teaching and earn revenues from the sale of their products. One of the problems observed during the research is that it was not possible to find databases on the websites of the ministries of education about cooperatives which are already started and ways of their functioning.

Through research on this topic, SSSRG Istočno Sarajevo has explored the possibility of funding from the budgets of the founders of secondary schools, and it was found that in these conditions it is not possible to provide all the means for equipping the classroom where hands on classes are held or for the establishment and functioning of a cooperative. The funds allocated from the budget¹⁷ for equipment are between 2-5% of the total budget. This indicates the insufficient readiness of institutions to provide quality conditions for schooling. The number of schools (311) is too large compared to the current financial situation of all levels of government in BiH.

“A big problem is that this is the most expensive way of organizing classes where hands on learning is applied, but it is the most cost-effective and most useful. However, we must be aware that purchasing all the necessary equipment and fixing the one that exists already costs a lot.”

Participant of the SSSRG Istočno Sarajevo

SSSRG from Istočno Sarajevo believes that it is necessary to provide safe opportunities for cooperatives to be founded, and then only expect that school management has developed strategies for their functioning. During the survey, examples from companies that were founded by schools were collected, but did not have enough developed strategies of functioning to survive. Adequate assistance and support from the relevant institutions were absent, and there were no financial resources to maintain operation in the plants or to replenish supplies. In these situations, the school company did not fulfill its basic function, providing opportunities for quality work on certain jobs, and from it students did not benefit.

“The working conditions are poor, it's done in a closed, dark and cold prospect, and equipment like boots, gloves and tools is in poor condition.”

Participant of SIG Sarajevo

High school students believe that through the current way of teaching they do not have enough programs to develop teamwork or the necessary work skills and habits. The purpose of secondary school cooperatives is to develop students' skills needed for future work, and the researchers themselves consider that in this way they would have more time and space for adequate study of professional subjects.

"I've heard about secondary school cooperatives from friendly schools that have had a pretty good experience with it for a long period of time. I think that every secondary school should have this kind of hands on schooling, because through this kind of work it can be much better and more achievable."

Professor of subjects where hands on schooling is applied, Istočno Sarajevo

From the review of legal regulations, it was concluded that secondary schools must obtain the necessary permission to establish a cooperative, but the ministries are not obliged to finance this type of teaching organization. The planned annual budget funds for education are not sufficient to fund the work of student cooperatives.

"When we look at the last couple of years we went to secondary school, we have not seen schools receive some big donations to equip the classroom. We know that funds for the construction of a ballroom have been obtained in the absence of a gym. But there was no progress in the development of school classrooms."

Participant of the SSSRG Istočno Sarajevo

Students see the unused financial resources that can be secured through donations to schools as the cause of the problems. There has been information that the City of Istočno Sarajevo from the budget for 2018 allocated 30,000 KM for secondary school projects proposed by the school management. Annually, significant funds for the education sector are allocated through civil society organizations. As one of the proposals for improving practical teaching, students from Istočno Sarajevo defined more active cooperation and the use of funds from these grants, because in this way mutual benefit is achieved.

"The hairdressing course is the best equipped in the entire school. The rest of us are trying to learn how to get the needed equipment, which is especially hard for chefs. We think that classrooms can be equipped through donations from different funds, embassies that fund projects, and so on."

Participant of SSSRG Istočno Sarajevo

The common position of students and teachers on the issue of cooperatives is similar and they consider this to be an educational process of better quality. This way the organization of the teaching process will give the students the motivation to already work through their secondary school in their companies, thus gaining experience. In addition to the experience here, there is also an opportunity to get the first monetary income for your own work.

"I would even be pleased if that was to happen, because I am sure that the will and motivation of the students would increase and that they would certainly be more interested in working. They would certainly have more experience working after secondary school.

Professor of the subject where hands on schooling can be applied, Istočno Sarajevo

Research conducted by secondary school student research groups on this topic indicates the willingness of students and teachers to work in student cooperatives when they have all the preconditions for founding and organizing cooperatives. In this way, the education of students is accompanied by an entrepreneurship system that is increasingly evolving through educational systems in Western Europe. The law stipulates the possibility of establishing student cooperatives, and this option is completely left to decision-making by the school management. By using donations from various school education funds, they can ensure the establishment and functioning of cooperative societies that can influence school development with their income. This system functions in the schools of the Western Balkans, so in Croatia we have an example of 540 student cooperatives which are functioning well.

Teacher training for the application of modern technologies

Although the subject was not specifically explored by the individual SSSRG, within the framework of the discussion on the adequate implementation of classes where hands on learning is applied in secondary schools, the students emphasized the need to work with teachers through continuous education and training on innovative teaching methods, as well as the use of alternative the way of performing such teaching, using the latest achievements in the field of information and communication technologies.

During the research, it became evident that a number of professors and students were trying to make classes where hands on learning is applied, more qualitative, which required additional efforts due to outdated methods used for teaching. Teachers need to improvise teaching methods because they do not have the equipment for unobstructed realization of classes. Examples are set out that teachers who have been educated in the previous system use the same methodology that is not in line with the needs of current generations.

"The professor improvises a kind of plan and program so that they can keep up with the times. He is trying and doing his best to work, but we have no conditions. Only when a computer at home breaks down we can bring it to school to repair it together. All software is pirated and does not have any licenses."

Participant SSSRG Istočno Sarajevo

In order to be able to improve the entire system of organization and realization of practical teaching in secondary schools, it will not be enough to provide funds for the renovation of obsolete equipment in classrooms for practical school instruction, but at the same time it is necessary to work on training of teaching staff to adjust methods teaching in accordance with the technological achievements of the generations they are teaching to.

RECOMMENDATIONS

At the end of researches in their local community, the secondary school student research team has formed a set of recommendations which can be taken into account by solving some problems in the area of realization of classes where hands on classes are applied in every secondary school in Bosnia and Hercegovina. Those recommendations involve guidelines for future research in this area, recommendations for interventions that are guided to different dimensions of the organization and the realization of hands on schooling in secondary schools.

Preporuke za buduća istraživanja u ovoj oblasti

1. Explore and examine every legal assumption in detail to determine every possible intervention in processes of changing legal regulations, including mapping documentation and law acts that do not exist and possible sources of financing in the areas which regulate the organization and the realization of hands on schooling in secondary schools.
2. Explore and examine the cooperatives that already working in secondary schools with a special focus on the organization of work, sources of financing and the involvement of students in processes when it comes to planning certain activities.

Recommendations for interventions

Solving problems in special ways of the organization and the realization of hands on schooling in secondary schools requires an all-inclusive and systematic approach which includes the development of some mechanisms of support for secondary schools on the local level, identifying clear roles of every institution in the process of the organization and the realization of hands on schooling, getting adequate laws which are going to regulate areas of hands on schooling in secondary schools, just like interventions which are going to be targeted on securing of making adequate plans of financing secondary schools who aim to improve of conditions for the realization of hands on schooling.

Secondary school student research groups have identified smaller interventions which can be implemented on different levels with a goal of improvement of the conditions for the organization and realization of hands on schooling in secondary schools.

1. Setting up balanced mechanisms on the levels of entity, canton and district Brčko which are going to secure clear obligations of everyone in the processes of the organization and realization of hands on schooling inside and outside of secondary schools.-making plans and/or contracts for the realization of hands on schooling with which the question of insuring the students and the question of giving grades and rewarding the students will be included.
2. Setting up mechanisms of active participation of students in the processes of making decisions that are about the organization and the realization of hands on schooling and setting up mechanisms for the evaluations of the entire process of the organization and the realization of hands on schooling.

3. Promoting the need for changing Pedagogical standars and the normative on how to regulate the minimal standards of equipment of the classrooms for hands on schooling.
4. Promoting the possibility for networking of vocations inside secondary schools so that the common use of the existing equipment could be organized, which would open more possibilities of getting new equipment.
5. Setting up mechanisms for strengthening the management capacity in secondary schools for the development of partnerships with the private sector and donators on how to secure the extra funds for equipping schools.
6. Creating and more defining the law more clearly for establishing student cooperatives as well as their independent way of functioning with the school administration which is going to engage for the improvement of actions of those cooperatives.
7. Organizing seminars of educations for professors of subjects where hands on learning is applied where they will be informed and taught on how they to going to use contemporary equipment, and how to transfer their new knowledge to students so that they could improve the lessons where hands on learning is applied.
8. Creating manuals for the professors of subjects where hands on learning is taught and applied so they would be be able to follow the development of new technologies and their use at working with students on hands on learning.

CONCLUSION

The level and quality of the education system in the country is one of the main factors which is in correlation with the perceived economic uncertainty and registered unemployment in the society. In the case of education not being connected with the labor market and not following the new reform trends, it could lead to big oscillations in the society and having poor quality education for young people who are not able to be competitive in the labor market.

The accumulated number of unemployed people at the bureau of employment is the indicator that the enrollment politics of secondary school students, as well as the universities is not in balance with the needs of labor markets. It is necessary to balance the number of students who are signing up for certain professions and adapt with real capacities and needs of the society that we live in. On the other hand, there exists the need of balancing the educational processes including the way of learning and studying which would ensure that the whole educational system will be in balance with the today's development of science and technology.

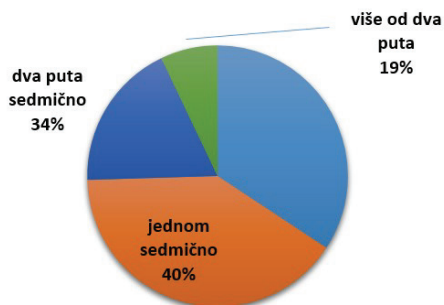
The goal of the education system that ensures adequate and relevant hands on schooling, needs to be a motivation for students to work in teams, adapt all sorts of work skills, familiarizing with the marketing and competitions. This way it is possible for students to get acquainted with the law which rule the labor market and that they develop the will for succeeding at work through continuous activity.

Even if the financial situation of our economy is bad, we have a lot of companies that are working very well and have a big interest for realizing practical classes in a quality manner because they are sure that the future workers will be ready for challenges of work for which they were educated for.

Secondary school students are not provided with an opportunity to take their own step to get employed and make their own business after finishing secondary school if they do not have a quality knowledge or their own financial resources and experience. It is necessary to help innovative young people develop and get them ready for challenges that are coming up because it is really hard to expect them to get employed immediately after finishing secondary school. The role of the education system amongst the other things is to prevent young people from finding themselves unemployed and strengthen them to take responsibility in their own hands when it comes to making their own initiatives.

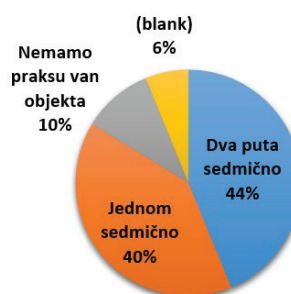
This research has shown how the ways of organization and realization of hands on schooling in secondary schools in different local communities depend on local capacities and resources. This way the system has been set, leads to the fact, that the students who are attending the same secondary school, same vocations in different communities, do not have the same conditions for education in the sense of taking classes where hands on learning is applied which is setting them in a unequal position and it makes them unequally competitive on the labor market from the beginning. Because of that, one of the first steps of solving this challenge in this field needs to be setting up the minimum standard for the organization and the realization of hands on schooling in all secondary schools in Bosnia and Hercegovina.

Koliko često u toku radne sedmice imate časove praktične nastave unutar škole



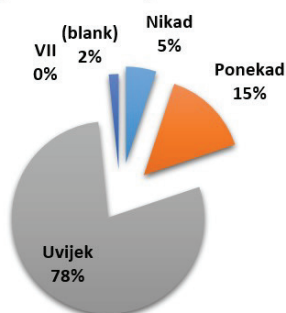
Grafikon 1. Praktična nastava unutar škole

Koliko često se praktična nastava obavlja van objekta škole?



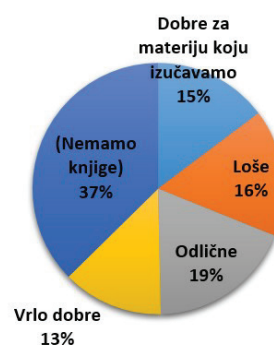
Grafikon 2. Praktična nastava van škole

Da li se časovi praktične nastave odvijaju prema planiranom rasporedu časova?



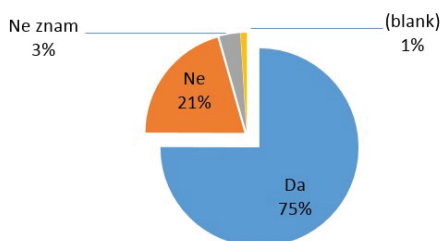
Grafikon 3. Odvijanje nastave po planiranom rasporedu

Kako bi ocijenili knjige iz kojih učite na časovima praktične nastave?



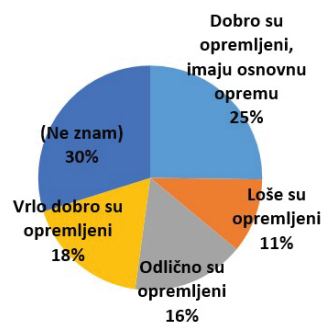
Grafikon 4. Ocjena knjiga za praktičnu nastavu

Da li imate kabinete koji su isključivo opremljeni za obavljanje praktične nastave?



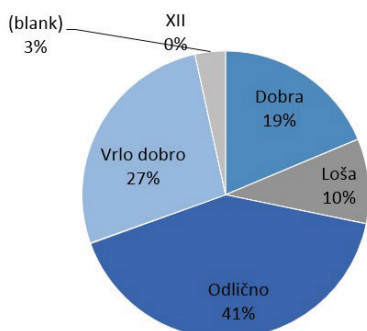
Grafikon 5. Opremljenost kabineta

Molimo te da ocijeniš opremljenost kabineta za izvođenje praktične nastave:



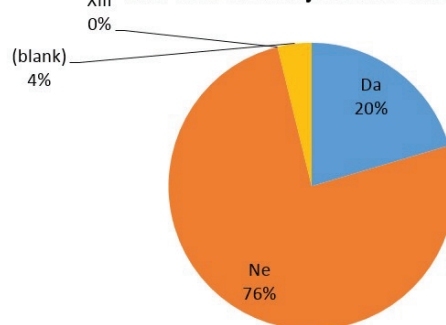
Grafikon 6. Kabineti za praktičnu nastavu

Praktična nastava van škole



Grafikon 7. Praktična nastava van škole

Znaš li šta su srednjoškolske zadruge



Grafikon 8. Srednjoškolske zadruge

Popis srednjih škola čiji su učenici učestvovali u istraživanju prema lokacijama

1. Banja Luka

- Srednja medicinska škola
- Katolički školski centar
- Gimnazija
- Srednja ekonomska škola
- Srednja tehnička škola
- Ugostiteljsko-turističko-trgovinska škola

2. Brčko Distrikt

- Srednja tehnička škola
- JU Gimnazija „Vaso Pelagić“
- JU Poljoprivredna i medicinska škola

3. Gradačac

- MSŠ Hasan Kikić
- Gimnazija „Mustafa Novalić“

4. Istočno Sarajevo

- Srednjoškolski centar „Istočna Ilidža“
- Srednja škola „28. juni“ Istočno Novo Sarajevo

5. Mostar

- Srednja medicinska škola
- JU Gimnazija
- JU Druga gimnazija
- Srednja elektrotehnička škola
- Turističko-ugostiteljska škola
- Srednja prometna škola
- Mašinsko-saobraćajna škola
- Srednja strojarska škola „Fausta Vrančića“
- Srednja građevinska škola

6. Sarajevo

- Srednja mašinska tehnička škola
- Srednja škola za tekstil, kožu i dizajn
- Građevinsko-geodetska škola
- Srednja škola poljoprivrede, prehrane, veterine i uslužnih djelatnosti Sarajevo
- Srednja medicinska škola
- Treća gimnazija
- Poslovno-komercijalna i trgovačka škola
- Srednja zubotehnička škola
- Prva bošnjačka gimnazija
- Srednja škola za okoliš i drveni dizajn
- Željeznički školski centar
- Gimnazija Obala
- Srednja ekonomska škola

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