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SOCIAL INNOVATIONS DESIGN – THE VIEWPOINTS OF TEACHERS, EXPERTS AND STUDENTS

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ABSTRACT

The current article represents a newly introduced model in the training practice of the “Design of Environment for Disabled People” study module, which is a part of the “Engineering design” (Interior and design of furniture) masters program in the University of Forestry.

The main focus is on putting the students in a real situation, where they can meet specialists from the practice of the social activities and the final users of their future-to-be products – disadvantaged children or children with different kinds of disabilities. In this way the studying process is formed into something more: through stimulating the engineering projection in 3D, put in real time with added emotions.

This method differs with its way of stimulating the strengths of the ones being trained and the dynamization of their active involvement in the learning process with independent and individual sides.

It also provokes the development of new ideas and shows a new way of learning and supporting the students as it expands their business operations and includes them in working directly with the final users of different statuses and needs.

Key words: design, disabled people, disadvantaged children, training model, rehabilitation through design, education management.

INTRODUCTION

The “Design of Environment for Disabled People” study module is part of the obligatory program of the Master's degree students in module “Design of the living environment” and is studied during the second semester of the first year of their training. The theoretical material analyses certain special topics, connected with the building of environment for people with disabilities; the requirements, the constitution and furnishing of urban environment, residential and public buildings, hospital rooms as well as nursing homes for people with disabilities. Present-day tendencies in this type of places as well as the methods of adapting the environment for the needs of people with disabilities are considered.

In seminar classes, students develop three designer briefs dedicated to individually selected themes (function zones of residential and public buildings, elements of the urban environment). Traditionally, part of those projects gives the students the ability for personal choice regarding the subject matter – houses for old people, separate zones in public interiors created especially for disadvantaged people, designing an environment for disabled children, etc. The course projects dedicated to children appear to be a rarity throughout the years and most probably those projects are not that often chosen due to the belief that it is very difficult to create something functional, comfortable and beautiful for such recipients.

The stigmatization of disabled people in our communities definitely has its negative impact on the students. A part of this stigma is connected to the expectations of too much emotional load for the students, not knowing enough of the everyday life struggles kids and older people with disabilities face, the lack of any structured or integrated information in their teaching process regarding the specific users as well as many other individual reactions.

Supporting this stigma, intentionally or not, throughout the years leads to a significant undeveloped gap between designers and the final users in the face of people with disabilities. Unfortunately, this leads to deepening the problems which are left unsolved without the help of the engineering design approaches.

The "Engineering Design" Program is a time-approved, recognizable and clearly structured category for years, not only at the University of Forestry. Its relevance in the XXI century is indisputable, especially through the constant investment of new technologies in student education and teacher training. Having this in mind and following the path of innovations, it is clear that it's mandatory to suggest new situations for each new class in a way that the students' potential is engaged more and more, maximize the capacity of the university and best stimulate inter-institutional and inter-organizational cooperation in such a situation.

After getting all of this out of the way, it is no surprise that exactly "Engineering design" program is a solution for the number of the mentioned challenges is sought; (1) the stigmatization among the students of the topic of work with disabled people; (2) the establishment of high-tech and modern approaches to environmental design for everyone, including people with disabilities; (3) breaking the unfavorable tendencies of piling

up unsolvable issues regarding the disabled people's environment; (4) forming the educational process as a response to actual public needs; (5) creating a good educational practice for identification and stimulation of a student's strengths.

STUDENTS TRAINING IN "DESIGNING THE ENVIRONMENT FOR DISABLED PEOPLE" REALIZATION OF THE MODEL

I: Inviting guest lecturers in the students training process is common practice internationally and domestically. This method is being used traditionally and for the "Engineering design" study program in the University of Forestry. The specific part of the model's realization is attracting a humanitarian guest lecturer, not an engineering one. The purpose is to combine most effectively the strengths and the positive attitude between all participating in the training process by supplementing expertise and provoking a new and different viewpoint of the educational process.

The already mentioned stigmatization challenges are mastered successfully throughout the years in the preparation of the humanitarian specialists (Bombak, A.E., 2014). Thanks to the achievements of the humanitarian practice, it is possible to adapt the matter in a way that it is perceived qualitatively and fully by the students studying "Engineering design".

At the same time the guest lecturers usually don't have much time on their hands when they teach and this leads to a specific approach on their behalf in order to achieve effectiveness and efficiency of their intervention in the educational process. In the shown Model this specificity is mostly in the exportation of the process from the University and putting it in the typical for disabled people environment – in this way the lectures, the

discussions and the educational process as a whole are going to take place in the social services that community has.

During 2021 the social services Day Care Center for Children with Disabilities, Community Support Center, Family-Type Accommodation Center for Children, Center for Social Rehabilitation and Integration and Family-Type Accommodation Center for Adults were implemented. The range of these services includes all familiar to the Bulgarian country risk groups of people disadvantaged in one way or another, including people with behavioral problems; those deprived of parental care and care of relatives; disabled people; adoptive parents; children with outstanding talents; close family to people with disabilities etc. Also, these social services cover almost all the functionality of the social support there is to offer in the country.

The educational process takes place in the usual environment of the mentioned community social services, including the presence of professionals. This escalates the challenges the students have to face as it stimulates discussions of a specific type; shortens the given time for observing, thinking through and solving specific tasks; creates a rather protected setting for personal experiences and rethinking of the familiar and the unfamiliar reality; deploys a series of not so typical examples for spatial solutions which have proven their efficiency in the direct work of the social services – even though they purposefully don't meet a number of standards that are included in the students' educational process.

The realization process of this Model starts with the trip the students will take from their University in Sofia to the community social services in the town of Karlovo – a two-hour trip when a unified idea for the participants is going to be formed. An idea or an

expectation for what is to come – the expected new training setting, the specifics of the local community and their coverage in the social services, the profile of the professionals and the users in those services as a whole. The time range of the trip is enough to set the framework of the Model in which the students get themselves involved.

The situation foresees that the students will get to know practically the services of the day care work as well as that of the resident type (providing a 24-hour support); the services that work mainly with children and different ones that work mainly with old people, as well as social services that combine these two types and work integrated with children and adults.

The Model can be split into several main points:

1. Presenting the service in detail by the guest lecturer – pursued goals, expected results, profile of the professional team, and range of the users.

2. Presenting the service in detail by an expert who is a part of the professionals' team working in the service – the most common challenges in their daily life, good practices and special achievements, connection with the local community;

3. Questions from the students to clear up the statute of the social service;

4. A tour around the building of the social service and a visualization of interior decisions to the social challenges from the practice. Searching for possibilities to improve and enrich the interior and its functionality through the students' intervention.

5. Interviews with the staff.

6. Interviews with the users.

Each one of main points systematically and consistently builds up a situation in which the students are enlightened with new opportunities, strengths, achievements, positive viewpoints, development, dynamics and

imagery – for everyone included (students, users and professionals) and for the environment too.

For an effective and efficient teaching, the Model applies a rich in its communication approach – combining the formal and informal communication, intensified nonverbal communication and impact, provocation and platform for expression and integration of personal experience and impressions, discussion (Angelova D., R. Raycheva, R. Chipev. (2019)).

Through the structuring and the spectral communication strategy of the educational process the student's mind fills up with feelings of comfort, confidence, understanding of the material – mostly through the given opportunity to be individually present in the moment and experience the specific dimensions of the future-to-be project. Thus, the stigmatizing spaces are exhausted, as in reality no resource is released for them, such is not created. On the contrary – the content of the course is preventively saturated with proactive and positive data.

The Model foresees a dynamic observation of the students' reactions mainly due to the warnings forced by the stigmatization the University of Forestry has inherited throughout the years. The goal is to avoid any emotional burden, a hard to process experience, an incorrect perception of the reality (Raycheva, R., Angelova, D., Vodenova P. (2016)). The observation is based on typical techniques for the humanitarian sphere, using the didactic experiment as a research method for perception, registration and evaluation of phenomena, processes and states and their study with a specific goal (Горанова, Е., 2015). Perception is mainly sensory, but purposeful and systematic (Бижков, Г., Краевски В, 1999).

The observation is combined with preventive activities in which local professional

teams of social services are committed to support the students and in case of indication of ineffectiveness of the approach, to intervene individually with the individual student so as not to disrupt the group learning process for the other participants. In 2021, there was no need to intervene in emotional burnout. The provided and diligently applied content parts effectively master the audience and provide the necessary comfort for all participants and for the quality of the training.

After there are no more social services to be visited, a summary of the information is going to take place; universal and specific data for the community social services is going to be extracted; similarities and differences in the information are going to be distinguished – information received from all interested parties, including the professionals and the users; also, it is analyzed how much exactly the given information matches up with the seen premises – in interior and exterior terms. Overall, the aim is to provoke an attitude of friendship, curiosity, criticism and willingness to help and support the ones in need.

Taking into account everything that was either experienced, shown, analyzed or rethought, the students have the opportunity to choose the theme of their project as long as it covers the discussed needs of the specific social services. The range varies from the development of furniture elements to the overall design of the space for work, rehabilitations, social support, active social inclusion, games, concentration or any other need. Attention is paid to shapes, forms, sizes, colors, materials, local reality, traditions and the challenges of the future.

II: The students choose by themselves the specific purpose of their projects – whether it is the psychologist's office or the one of the art therapists, the sensory room or

the common space in a social center. The important thing is that, even though the projects are individual, all of them are part of one

whole, of something much bigger, and so they must have a sense of a united feeling and style.



Figure 1: Visualizations of designed interior, (project: Antonia Doncheva, 92496)

The work on these projects is definitely a serious challenge for the students as it requires putting themselves into new and different roles and positions (Raycheva, R., Jivkov, V., Angelona, D., Vodenova, P. (2016)). In this way different and new contact points between designers, users and environment are being formed. This creates an opportunity for one not so traditional but definitely a

much more effective approach to environmental design. The support of the outside experts doesn't finish with just visiting the place but also assisting the teacher constantly and continuously throughout the process of design.

Thanks to the individual meetings with different types of "personas", influencing the case, it becomes possible to create a conceptual model on which all decisions regarding

the designed interior and its products are based.

The conceptual model analyzed the following:

- Key discoveries from the field research – everything that has left an impact on the students during their meeting with the social experts, the helping staff and the inhabitants and users of the Centre should be presented. Important conclusions

should be synthesized concerning the needs, which are of particular importance in building the environment. Is there anything that should be avoided? Or something that should be present in the project? What are the everyday problems that must be resolved easily on a daily basis? The answers to these and many more questions should be presented here.



Figure 2: Key findings from the field study Interior decisions are important for both children and staff, (project: Antonia Doncheva, 92496)

(The staff is always ready to help and everyone loves their job; interior solutions are important for both children and employees; Customers need discretion and confidentiality regarding the interior; Furniture should make people feel good; Budget decisions; Its necessary to have sensory room; To have different shapes and textures in the room; To be able to make frequent changes and relocations in the room; There is no space/waiting room; Green is the color of Karlovo)

- Key discoveries from the desk research – after all the important key discoveries from the field research are made, it is necessary for the research to continue from the desk. This means that all important requirements and standards in regards

to the overall environment and its furniture in the specific case have to be analyzed. It is necessary to consider all ergonomic standards, the psychophysiological impact of the elements of the environment, the safety of the materials used, etc.



Figure 3: Key findings from the desk study, (project: Antonia Doncheva, 92496)

(The colors in the interior directly affect the mood of the users; The premises should be bright and spacious; The green colour has a calming effect; It is associated with nature, health and harmony and has a positive impact on creativity; Sufficient passage space is required; Equality between children; When designing furniture for children, certain dimensions are observed depending on the age group.)

- Profile of the user (personas)- detailed review of all participants in

the specific situation and environment, with their specific needs and wishes, problems and specifics.

3 Профил на потребителя



Figure 4: Profile of the user (personas), (project: Antonia Doncheva, 92496)

(Name / Nickname: The caring Lily; Role: employee; Common problems: very dynamic and tiring work, lack of space to rest; Needs: a well-organized space and a dedicated place to rest while the children have classes; Name /Nickname: the active Vicky; Role: child / user; Common problems: difficulty concentrating, having a lot of energy and not having a place to spend it; Needs: I corner with a variety of activities to keep the attention and also be educational)

- Synthesis – visual presentation of the concept – in order to achieve a general appearance of a certain environment it is important to choose the correct colour scheme,

materials and psychophysiological impact in order to create a common image of all areas and spaces designed in it.

4 Синтез - визуално представяне на концепцията



Figure 5: Synthesis – visual presentation of the concept, (project: Antonia Doncheva, 92496)

- The characteristics of the designed space – the space should be viewed in terms of convenience and peace in the working field of the corresponding specialists as well as a response to the needs of its direct users – in this specific case – the children.

5 Концепция за преживяването в пространството

“В залата за групови занимания, която създавам, служителите ще открият приятна работна обстановка, предоставяща им удобство и спокойствие в иначе динамичното ежедневие, с достатъчно лично и работно пространство, за да продължават да идват на работа с удоволствие, а децата/потребителите ще бъдат посрещнати в приветлив детски кът, който е способен да отговори на нуждите на всяко едно дете и може да предложи уникално преживяване, което да развие, стимулира и обогати техните знания и умения чрез разнообразни занимания.”

Figure 6: The characteristics of the designed space, (project: Antonia Doncheva, 92496)

(“In the group activity hall that I am creating, the employees will find a pleasant working environment, providing them with comfort and peace. Otherwise, the dynamic everyday life, with enough personal and work space, so that they continue to come to work with pleasure, and children/users will be welcomed in a beautiful children's corner, which is able to meet the needs of every single child and can offer a unique experience that will develop, stimulate and enrich their knowledge and skills through a variety of activities.”)

- Conception for the experience in the given space- when designing not only the functional arrangement of the environment and the construction of the furniture in it but also what kind of experience it will bring to everyone using it, it is guaranteed that one brand new but also perfectly effective conceptual model will be successfully implemented in practice.

6 Концепция за визията и характера на интериора

“Ще създам интериор на зала за групова работа, който да допринесе за постигане на комфортна и уютна атмосфера, и който може да посрещне и удовлетвори нуждите както на служителите, така и на децата. Залата ще бъде динамична, с бюджетно обзавеждане, което ще дава възможност за чести промени и постоянно изменящи се визии. Визията ще бъде основана на разнообразието под формата на различни материали и текстури, а избраните светли и приятни цветове ще въздействат върху настроението на ползвателите като им предложат спокойно пространство, което да ги зарежда с положителни емоции и да стимулира креативността им.”

Figure 7: Concept of the vision and character of the interior, (project: Antonia Doncheva, 92496)

"I will create an interior of a group work hall that will contribute to achieving a comfortable and cozy atmosphere, and which can meet and satisfy the needs of both employees and children. The hall will be dynamic, with budget furniture that will allow for frequent changes and constantly changing looks. The look will be based on variety in the form of different materials and textures, and the chosen light and pleasant colors will affect the mood of the users by offering them a calm space, which will charge them with positive emotions and stimulate their creativity."

SOME CONCLUSIONS AND REASONING REGARDING THE USED MODEL IN THE TRAINING OF THE STUDY MODULE

1. The shown model of training students is a product of combining the experience acquired in the span of many years from the social experts as well as the teachers in the field of interior design. Presented like this, it can be realized in a teaching atmosphere from professionally and life prepared teachers who confidently lead students from the upper course to new dimensions of the design specialties.
2. Very important for the effective use of this model are the spirit of cooperation, quality communication, the search for strengths and the positive attitude amongst all participants involved in the situation- teachers, students and outside experts.
3. Strengthening the mutual exchange; the support; the professional but
4. also the personal communication between students, teachers and experts shows essentially the progress the students make in the ambitious professional environment.
5. The Model creates conditions for deep, detailed and quality orientation in the opportunities of the profession and the acquired knowledge but also it unfolds the potential the students have in regards to exploring their unique individual characteristics which are not put in focus in the traditional engineering education. The mentioned are of a significant need in the direct skills of engineers in the modern dynamic and competitive world.
5. The Model creates space for the students to find themselves in a new role as a professionals; to immerse themselves into the dynamics of the real designing processes and helping functions, demanded by the modern engineering design.

6. The Model creates a new basis for comprehending the opportunities and boundaries (or rather the boundlessness) of the support which the design creates for people's lives, the professionals and the connections between them in a professional and living environment, including for disadvantaged people and disabled children.
7. The Model imposes in real time a democratic involvement of the potential all interested parties. In this way a direct and adequate feedback for the quality not only of the educational process but also of the searched concrete products is achieved.
8. The created platform for performance in the Model is also a reason for higher motivation regarding studying and a growing desire to participate in the community processes either in those connected to engineering or those to humanitarian activities- emanation of the quality education globally.
9. Integrating the student's own experience is brought to a worthy platform in a way that they get to experience the professional position starting from the university environment, forming an attitude of confidence but also skills for multisided judgment of their opportunities and untraditional approach.

CONCLUSION

The presented approach proves that with adequate management of the educational process, with skilled integration of every participant's strengths, as well as providing structured information and creating an environment for personal experiences, all students

will accomplish visibly higher and better achievements compared to the ones in the traditional educational and training approach throughout the years. In addition to this the students themselves show pride in what they have achieved and with professional confidence present their ideas with the belief that they will manage to make life better for all people, including the ones with disabilities. Based on their projects it's reported that traditional design into 3D environment is not fulfilling when responding to specific needs. Having in mind "the human" part of furniture and projected environments, focused on solving specific problems, connected to the final user's emotions and their surrounding environment, it imposes a different approach when comprehending a certain project. And when designing for children, the fast pace of childhood requires a sense of temporal exploitation through different measures than those standardly applied to the elderly.

Targeting the students' thoughts and creativity in the successful newly introduced model, in which, in addition to volumetric space, the dynamics of people's time and experiences are also taken into account.

Although the offered model of training students is not innovative for the area of engineering it is really successful in the academic practice. It generates a spirit of unity, cooperation, quality communication, identification of strengths and positive attitude among all involved participants. It evolves a growing sensitivity to the constant feedback between the participants, reveals essentially the students' progress in an ambitious professional environment, allows ahead of its time intellectual behavior and empowers students with an exceptional feeling of determination (and much more).

The Model provokes a methodic-practical focus in the students' activities in such a

way that it contributes with new opportunities to assess the strength of your own idea, with integration of the individual experience and in the end with investing into the student's individuality as well as into the other people involved- a key moment in the modern education, demanding a recourse management through dynamics and precision in an environment of traditional scarcity.

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