

УДК 378.04:640.43]:64.048

DOI <https://doi.org/10.33989/2519-8254.2019.6.205703>

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## TEACHING ERGODESIGN BASICS TO SERVICE INDUSTRY SPECIALISTS

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*У статті розглянуто особливості навчання основам ергодизайну майбутніх фахівців готельно-ресторанної справи. На підставі аналізу навчального процесу за освітньою програмою «Ресторанне обслуговування» у Вищому навчальному закладі Укоопспілки «Полтавський університет економіки і торгівлі» автори дійшли висновку, що основи ергодизайну сприяють формуванню низки фахових компетентностей фахівців сфери обслуговування, а комплекс освітніх компонентів, які є підвалинами ергодизайнерської освіти, не відображає в повній мірі потреби суспільства у новому підході до створення комфортних умов у готельно-ресторанній індустрії й потребує подальшого обґрунтування. Метою дослідження стало визначення основних напрямів навчання основам ергодизайну фахівців сфери обслуговування. Вивчення основ ергодизайну фахівцями сфери обслуговування саме визначає здатність організувати роботу закладів готельно-ресторанного обслуговування з урахуванням вимог ергодизайну та формувати гармонійне комфортне технологічне середовище. При проектуванні технологічного середовища та середовища обслуговування споживачів майбутні фахівці мають навчитися враховувати функціональні, конструктивні, антропометричні, технологічні, художньо-естетичні та гігієнічні вимоги, що в комплексі розглядаються як засоби ергодизайну. Під забезпеченням комфортних умов засобами ергодизайну потрактовано проектування оригінального стилю та зручного дизайн-інтер'єру приміщення, підбір ергономічно-функціональних меблів і обладнання, створення зручного графіку роботи закладу при максимальному додержанні санітарно-гігієнічних норм та правил пожежної безпеки.*

*У дослідженні систематизовано змістове наповнення освітніх компонентів освітньо-професійної програми підготовки фахівців готельно-ресторанного обслуговування, визначено основи ергономіки та дизайну, які вивчаються в окремих предметах та окреслено прогаліни у ергономічній підготовці.*

**Ключові слова:** професійна підготовка, фахівці готельно-ресторанного обслуговування, зміст навчання, основи ергодизайну, засоби ергодизайну, вимоги до проектування технологічного середовища.

**Introduction.** Service industry establishments are spreading, and their types are being diversified. For specialists ensuring organization and functioning of hotel and restaurant establishments, special importance is placed on their organizational, communicative, technological, managerial, and other competences. Creating comfortable conditions for service industry workers and customers contributes to the efficient functioning of an establishment. Comfort of the premises of hotel and restaurant establishments is an integral factor that combines functional, ecological, and aesthetic aspects of designing the working environment. Creating comfortable conditions by means of ergodesign implies developing an original style and convenient interior design of the premises, selection of ergonomically functional furniture and equipment, and organizing a convenient work schedule, all in maximum accordance with sanitary and hygienic norms and fire safety regulations.

The article considers preparedness of future hotel and restaurant industry specialists for professional activity as the result of training at a higher education institution, meant to provide them with professional knowledge and skills that determine their aptitude for provision of customer services. We share the opinion of many scholars who believe that other than vocational technical training of service industry specialists, a major component of their professional competence is the ability to organize the running of hotel and restaurant establishments according to ergodesign requirements.

Ergonomics is aimed at the creation of a safe and comfortable physical environment for the work of hotel and restaurant industry specialists and recreation of potential customers. The main task of designing a comfortable physical environment is to concentrate on the anthropometric aspects of ergonomics and to apply obtained information to the design of interiors and equipment. Such application allows developing anthropometrically oriented design forms, regulations, and aesthetics, contributing to the workers' efficiency, as well as facilitating the customers' ease and comfort in the interior environments that differ in purpose, age-specific features, and other parameters. Creation of a safe and comfortable environment mostly depends on professional ergonomic competence of designers and architects, however, the responsibility for complying with occupational safety and health requirements lies with the managers of service establishments and relates to the organizational competence of each worker of the establishment and their ability to maintain ergonomic environment and ensure comfort and safety of their own professional activity and of the establishment in general.

It can, therefore, be determined that knowledge of ergodesign fundamentals is essential for each service industry specialist regardless of his/her exact responsibilities.

**Theoretical Framework.** The problem of increasing the quality of training future service sphere specialists is the subject of many studies. The scholars who research this problem express interest in theoretical and methodological foundations, content and optimization of training specialists in hotel and restaurant industry (A. P. Konokh, O. O. Liubimtseva, V. K. Fedorchenko, N. A. Fomenko, etc.); special features of training specialists in the sphere of tourism and resort industry in Europe and the world (O. M. Danova, L. V. Sakun, K. O. Starodub, etc.); diagnostics of the quality of vocational education in tourism (Ye. M. Ilyina, O. S. Hrunkevych, H. S. Tsekhmistrova, etc.); development of communicative competence of future specialists (N. S. Yerukova, I. O. Zymnia, M. F. Stepko, etc.); problems and prospects of practical training of specialists in the sphere of hotel and restaurant business (L. V. Kozak, L. H. Lukyanova, N. S. Mykytiv, etc.). However, the researched issues of training service sphere specialists lack focus on their ergonomic competence and learning ergodesign fundamentals as part of formal vocational education of hotel and restaurant industry specialists.

**The primary aim** of the paper is to determine main areas of teaching ergodesign basics to service industry specialists.

**Discussion (Results).** The service industry as a tertiary sector of economy is the largest based on the number of workers (more than 50 %) and is rapidly growing. The analysis of the needs of domestic service industry revealed that labor market requirements necessitate reconsideration of the content of vocational training of specialists of respective categories (Shevchuk, 2018, p. 43). Establishments of hotel and restaurant business require training of the following specialists: assistant to managers of production and major divisions, hotel service specialist, conference service specialist, specialized service specialist, procurement manager, human resources manager, tourism and hotel activity manager, etc.

The "Restaurant service" study program at Poltava University of Economy and Trade, higher educational institution of Central Union of Consumer Associations of Ukraine (Ukoo-*pspilka*), provides training of socially-mobile, competitive, and highly qualified specialists in

possession of general and special (professional) competencies for the organization of service and production activity of the subjects of hotel and restaurant business. Learning ergodesign basics facilitates the formation of several professional competencies of future service industry specialists. Unfortunately, the content of the study program does not include learning ergodesign fundamentals as a separate subject, and the set of educational components that constitutes the foundation of ergodesign education does not fully satisfy the society's need for a novel approach to creating comfortable conditions in hotel and restaurant business. The set of educational components, content of which is in some way aimed at learning ergonomic requirements for the interior design of public dining establishments and hotel complexes, includes "Installation of trade and technological equipment," "Hygiene and sanitation," "Microbiology and physiology," "Aesthetics in restaurant business establishments," "Managing the quality of production and services," "Hotel buildings and equipment," "Standardization in hotels," "Technical drawing." A complex approach to designing hotel and restaurant establishments according to ergonomic regulations is realized in the course project. The aim of this educational component is to organize production at a restaurant business establishment, and one of the project requirements for the completion of certain tasks is taking into account the basics of ergonomics and design.

In the process of vocational training of future service sphere specialists, particular attention is given to interior design of the establishments, which has a significant importance for the productive functioning of the complex. Successful choice of general style, comfortable furniture, convenient equipment, lighting, etc. has an impact on the popularity of the establishment due to its safety and comfort. These are the aspects dealt with by the ergonomic science.

Ergonomic requirements for furniture selection determine how adequately a certain piece can serve its intended purpose. Functional requirements, based on anthropological and physiological data and hygienic norms, are conditioned by functional processes concerning the use of this piece by a person. In the process of modern interior design, great importance is given to the functional relationship of its elements, which allows achieving the integrity of interior solution. The clear organization of the interconnection of production premises with trading halls influences the proportions of the halls. The development of new types of public dining establishments, such as youth and evening cafes, has a significant influence on the interior style choice. In the trading halls of these businesses, customers watch TV shows, rest, read newspapers and magazines, meet their friends. Leisure zones are created in these halls, complete with sound equipment and TV sets. Therefore, the overall style of furnishing public dining establishments is changing. Preference is given to low furniture, sofas, low benches combined with flowerbeds, and magazine tables. The tendency to increase the free space of the hall contributed to the emergence of built-in furniture and compact placement of equipment.

Furnishing is one of the effective means of dividing space into separate zones. Mobile furniture allows to quickly modifying zoning by periodically updating the interior of the establishment. Non-mobile stationary furniture can undergo changes in the décor.

Differentiation of the hall space can be achieved by supplementing the integrity of overall style with the use of furniture of various shapes and sizes. In this case, one zone is furnished with items of one type, while another one is furnished with a set of tables, chairs, and sofas of another type, but all of them are connected by a common style.

When planning public areas, students should consider the form of service, since it determines the optimal location of entrance and exit points, size of the aisles between the tables, their placement, as well as several other factors. For example, in a self-service dining establishment the entrance to the hall should be located in close proximity to the serving line, while the dish sink should be placed on the opposite side of the entrance so as to avoid crossing the flow of customers and trajectories of service workers.

Tables can be arranged in rows or groups, and isolated zones can be organized using barriers and flowerbeds. The aisles between rows of tables should be wide enough for the free movement of visitors with trays. The distances between the angles of the tables in the diagonal arrangement cannot be less than 0.6 m; if the tables are arranged parallel to the walls, the row next to the wall should be attached to it, whereas the distance between the tables with conveniently placed chairs should be at least 1.5 m. The main aisles should be at least 1.5 m; for the auxiliary ones the minimal width is 0.75 m. However, these parameters can only be vaguely recommended, since in every separate case furnishing of the hall depends on its planned design and the form of service at a particular establishment (Hnatiuk, 2014, p. 128).

Constructive requirements ensure provision of technologically efficient and simple configurations of the objects, rational selection of materials, as well as choice of correct element sizes and node connections according to their functions, capacity, and operating conditions, aimed at achieving reliability and durability at the lowest cost of expenses. Configurations of an item should ensure its optimal functioning for the whole duration of exploitation period (Dudka, 2015, p. 15).

Restaurant tables intended for tablecloth service are usually made of wood and have a special table top design, which is usually coated with fabric to ensure a stable position for the serving items. This technique, however, does not comply with sanitary requirements, since spilled beverages and sauces soak the textile material over time. A better technique would instead consist of placing a canvas cover with drawstrings or an elastic fastening over the table top under a tablecloth, for it can be conveniently changed and washed. This technique is recommended for restaurants operating as diners during the day. Table tops in such establishments are usually covered in plastic – during the day customers dine without tablecloths, while in the evening covers are put on the table tops underneath the tablecloths.

Ready-made furniture sets for restaurants are rarely available. In every separate case selection of tables and chairs is conducted individually according to the artistic vision of the interior. Successful selection results in a set of furniture in the same style, with tables, chairs, and armchairs made of the same materials and with the same type of décor.

Artistic requirements necessitate the integrity of aesthetic and functional features. Aesthetics and beauty of modern furniture lies in its convenience and functional perfection, integrity of shape, construction, material and technology, simplicity and conciseness of form, harmonious combination with the interior, rational use of materials, successful choice of the color scheme (Dudka, 2015, p. 15).

The choice of colors is an effective solution for the space issue of the interior. It is a well-known fact that cool light colors visually enlarge the room, distancing the objects, while warm rich colors make them appear closer. Hygienic requirements to interior design of service establishments result in the prevalence of light hues in the premises' décor. A minute decorative accent will suffice in order to give the interior a distinctive ambiance.

Techniques of applying color solutions to interior problems are distinct in their variety. For example, if the general color scheme of the hall is neutral, an accent can be shifted to the upholstery or table top color; if the main elements of the interior – floor, walls, furniture – are united by one color, such as white, the accent is shifted to the customers' clothes.

When choosing the colors for interior design, it is important to remember that enough is enough. There are many unfortunate examples of interior integrity being ruined by the desire to use the whole range of decorative techniques – reliefs, paintings, panels, ceramics, intense paint for walls and floors – in the design of the hall. Reasonable minimalism and compliance with the laws of composition are key factors in creating a harmonious and comfortable environment.

The choice of lighting plays an important role in the arrangement of the dining hall interior. With increasing frequency, service establishments rely on natural light from one side of the

hall in combination with two-sided, three-sided, and upper lighting, thus connecting the interior with surrounding buildings and landscape. Techniques of artificial lighting are rather diverse and should be directly connected with furnishing of the hall. In the halls of major restaurants, diners, and cafes, different systems of equally diffused lighting are installed in the false ceiling plane, while illumination of certain zones is increased and localized lighting (for example, the dance-floor, stage, booths, separate groups of tables, etc.) is applied.

Technological requirements depend on the type of production and state of technological process. Adaptability of the objects is defined by the ease of their assembly and disassembly, interchangeability of parts, level of normalization and unification, possibility of mechanization and automation of production processes. Compliance with these requirements is especially important due to the increase of mechanization and automation of technological processes (Dudka, 2015, p. 16).

Selection of technological equipment and tools that are in contact with food products should be conducted in compliance with the following requirements:

- the surface of the equipment is made from materials that can be easily maintained in an appropriate sanitary state and conditions that reduce the contamination risk, and can be cleaned and disinfected;
- equipment is placed and arranged in a way that allows easy cleansing of the equipment and environment;
- equipment should be calibrated according to the current legislation;
- if the use of chemicals is needed to prevent corrosion of equipment and containers, it should be done according to the appropriate manufacturing practice (Scherbak and Zavarzin, 2016, p. 9).

Successful selection of furniture, conducted according to the anthropometric parameters of a person and requirements of sanitation and hygiene, and its arrangement according to the requirements of ergonomics and occupational safety produce the effect of comfort and convenience in service establishments.

The above-mentioned knowledge and skills ensure the formation of a separate professional competency realized in the ability to organize compliance of employees of the establishment with the rules and regulations of occupational safety, fire safety, manufacturing sanitation and personal hygiene; to organize instruction of employees of the establishment in occupational safety and rules of operating trade and technological equipment, tools, kitchenware, furniture, etc.

**Conclusion.** Modern higher vocational education of future service sphere specialists should be organized in accordance with modern requirements for hospitality and enable completion of various tasks ensuring productive functioning of establishments in this industry. These objectives can be achieved through training future specialists in a way that satisfies requirements of the modern labor market. Apart from the typical areas of study, particular attention should be given to the ergodesign constituent of the professional competence of specialists in hotel and restaurant industry. Thus, an important component of educational process is students' understanding of ergonomics and design requirements at all stages of professional development. A promising direction for improving this process is the introduction of a separate course subject with an emphasis on ergonomic training of these specialists that would introduce them to a new way of thinking and working, enable them to obtain and develop knowledge of ergodesign and meet ergonomic requirements in different aspects of organizing the operation of service sphere establishments.

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## TEACHING OF SERVICE INDUSTRY SPECIALISTS THE FUNDAMENTALS OF ERGODESIGN

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*The article considers the peculiarities of teaching the basics of ergodesign to future specialists of hotel and restaurant business. Based on the analysis of the educational process according to the “Restaurant Service” educational program at the Higher Education Institution of Ukoopspilka “Poltava University of Economics and Trade”, the authors concluded that the fundamentals of ergodesign contribute to the formation of a number of professional competences of service industry specialists. The set of educational components, which are the foundations of ergodesign education, does not fully reflect the needs of society in a new approach to creating a comfortable environment in the hotel and restaurant industry and needs further justification.*

*The aim of the research was to determine the main areas of teaching fundamentals of ergodesign to service industry specialists. The study of the ergodesign fundamentals by the service industry specialists determines the ability to organize the work of hotel and restaurant sphere taking into account the requirements of ergodesign and to form a harmonious comfortable technological environment. When designing the technological environment and customer service environment, future specialists should acquire the skills necessary to fulfill functional, structural, anthropometric, technological, artistic, aesthetic and hygienic requirements, which are considered as a means of ergodesign. Creating comfortable conditions by means of ergodesign implies developing an original style and convenient interior design of the premises, selection of ergonomically functional furniture and equipment, and organizing a convenient work schedule, all in maximum accordance with sanitary and hygienic norms and fire safety regulations.*

*In the course of this research, we analyzed the content of educational components of the study program for future hotel and restaurant industry specialists, determined the basics of ergonomics and design included in some courses, and described the missing constituents of ergonomic training.*

**Key words:** *professional training, specialists of hotel and restaurant service, content of training, fundamentals of ergodesign, means of ergodesign, requirements to designing of technological environment.*

Надійшла до редакції 4.09.2019 р.