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THE ART OF SCIENTIFIC MIND

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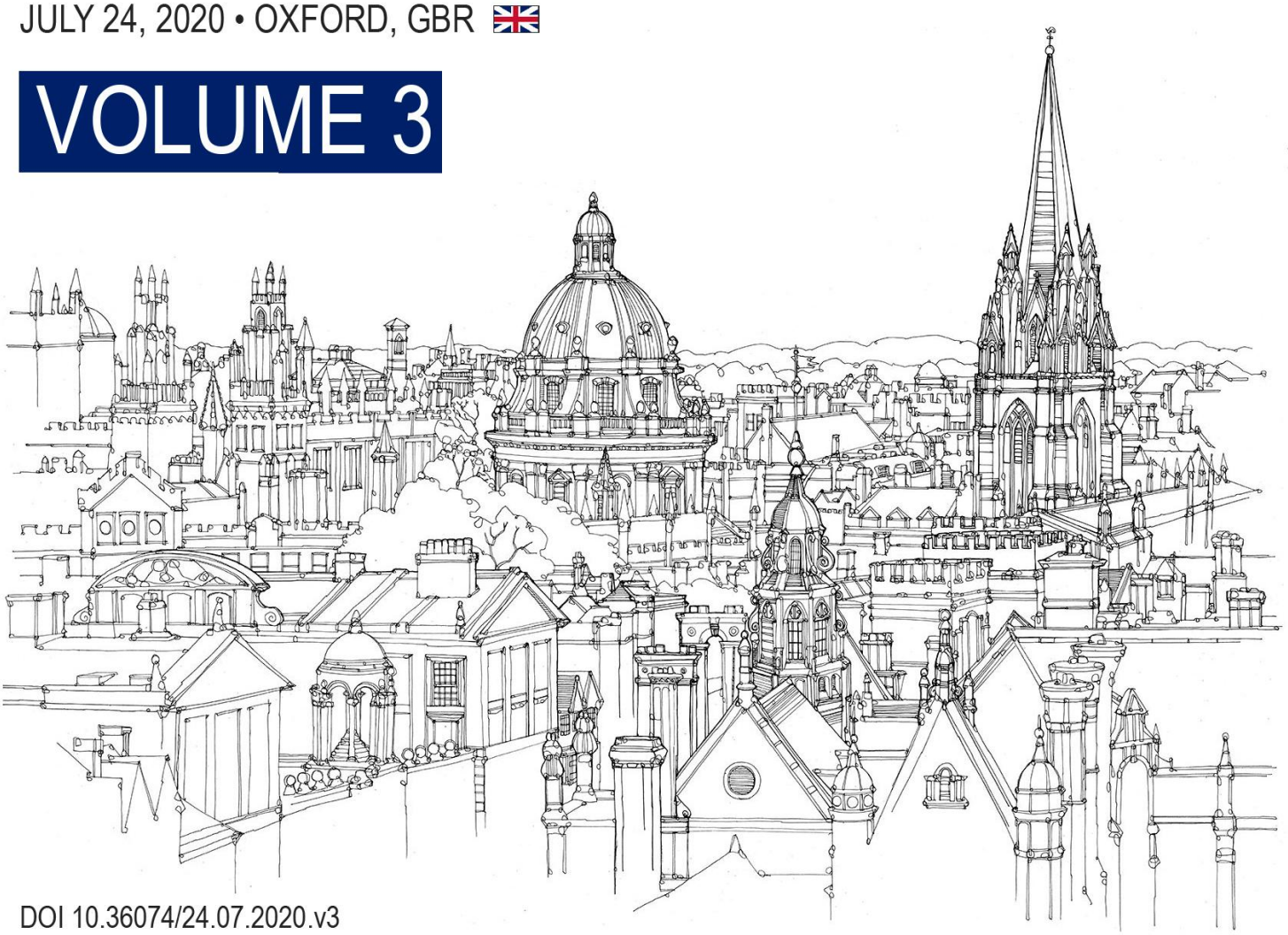
THEORETICAL AND EMPIRICAL SCIENTIFIC RESEARCH: CONCEPT AND TRENDS

JULY 24, 2020 • OXFORD, GBR

VOLUME 3



DOI 10.36074/24.07.2020.v3
ISBN 978-1-5272-5968-3

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Oxford • United Kingdom

UDC 001(08)
T 44

https://doi.org/10.36074/24.07.2020.v3

T 44 **Theoretical and empirical scientific research: concept and trends**: Collection of scientific papers «ΛΌΓΟΣ» with Proceedings of the International Scientific and Practical Conference (Vol. 3), July 24, 2020. Oxford, United Kingdom: Oxford Sciences Ltd. & European Scientific Platform.

ISBN 978-1-5272-5968-3
DOI 10.36074/24.07.2020.v3

Papers of participants of the International Multidisciplinary Scientific and Practical Conference «Theoretical and empirical scientific research: concept and trends», held in Oxford, July 24, 2020, are presented in the collection of scientific papers.

The conference is included in the catalog of International Scientific Conferences; approved by ResearchBib and UKRISTEI (Certificate № 302 dated 18 May 2020); certified by Euro Science Certification Group (Certificate № 22167 dated 19 June 2020).

Bibliographic descriptions of the conference proceedings are indexed by CrossRef, ORCID, Google Scholar, ResearchGate, OpenAIRE and OUCI.

UDC 001 (08)

ISBN 978-1-5272-5968-3

CONTENT

SECTION XII. PEDAGOGY

DOI 10.36074/24.07.2020.v3.08

TECHNOLOGY OF MIND MAPPING AS A TOOL OF ENHANCING EFFECTIVENESS OF MODERN LECTURES

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At the present stage, lecture is both organizational form of studying, “a specific way of lecturer and listeners’ (students’) interaction during which various content and different methods of teaching are used” and a teaching method as “monologue statement of study material in systematic and consecutive form, mainly concentrated on fundamental scientific problems” [1].

At the same time, scholars are of different opinions concerning lecture as a form of classes. Yu. Krasnov is sure that mastering practical abilities with the help of lecture-seminar study technology is extremely unreal task for implementing at higher educational establishments and confirms his viewpoint with the following arguments:

– inertia of study “activity”;

– verbalism, too many words, talk, not obligatory speaking, little conceptual and in general, any thinking (operating with figurative and symbolic idealizations). Compulsion to memorize empty sign, word forms of knowledge-information and retell it at pass-fail test or examination.

– transmission and compulsion to mastering ready knowledge (scientific or quasi-scientific) without understanding its genesis;

– monologue character – student still has no questions, but answers are ready for him (her), he (she) has practically no time to understand answers, so he (she) has to reconcile and cram, learn lecturers’ words not understanding their essence.;

– formation of specialist’s personality by the example of manufacturing machinery;

– as a result of monologue and technocratic character of education student becomes the object of pedagogic activity, and studying turns into conveyer. Not having time to understand and being pressed with “score” form of knowledge evaluation at pass-fail tests and examinations, student has to (!) cram, memorize barely sensible, incomprehensible information;

– methods, methodological fetishism, instructive technological essence and corresponding description of pedagogic work rule (what, when, and how to talk). It deprives pedagogic activity of sense and content, maximally reduces it to preliminary planned verbal texts-remarks (both on the part of the pedagogue and students) [2].

D. Chernylevskyi is also categorical in his opinion of lecture as general classroom form of teaching being the most ineffective among other forms of students' instructing at higher educational establishment [3]. M. Volokhonskaia received interesting results during her dissertation research: "the concept of "lecture" among 80% of students is associated with words "boredom" and "boring" [4].

We think that the above mentioned arguments concerning lectures are really convincing, and it may seem that the topic of the expediency of using lecture as a main form study process at higher educational establishment has been settled. However, while *customs training* for commodity research experts, situations often arise when lecture form of teaching cannot be replaced by any other. Firstly, this is the absence of up-to-date textbooks in customs procedures (their content becomes out of date even before publishing); secondly, the study material in a specific theme often requires methodical adaptation by the lecturer, as it is too difficult for independent study from the viewpoint of applied using. Besides, there are contradictory concepts and problem questions in the field of the state customs activity, connected with specifics of its performing: determining customs cost of goods, creating, introducing, and developing the system of analysis and risk management at defining separate forms of customs control, the technology of customs registration, and many others. So, lecture is necessary for objective interpretation of the above mentioned questions.

Concerning the expediency of lecturing, we entirely share the viewpoint of G. Neverov, who mentions that education as a social institution, while developing and self-improving, changes its structure and content in accordance with changes and relations dominating in the society at the present stage of its historical development [5]. We also agree with O. Hurska that "… process is not the main thing, but the result – to teach and it is not important in what way (by using the traditional or non-traditional lecture or other forms of studying)" [6].

In our opinion, interactive lectures have considerable potential in developing cognitive and professional motives, theoretical knowledge, professional value relations, professional thinking and other professionally important qualities of students. In case of rationally structured material and under using modern approaches to activating students' attention, the drawbacks of lectures, mentioned by M. Volokhonskaia [4], Yu. Krasnov [2], G. Neverov [5], D. Chernylevskyi [3] can be considerably corrected.

We consider that desirable results during lecture can be obtained, if to take away the students' stress in the beginning. First of all, the situation of informal communication has to be created in class, which will enable to learn and understand better the level of students' readiness to apprehend new material. Asking "correct" questions and suggesting future specialists to share their viewpoints concerning certain professional topic, lecturer can create confidential atmosphere in the classroom, better understand his (her) students and achieve activation of their attention. As a result, students' motivation to study will be enhanced, and everyone present will participate in the lecture.

Lectures accompanied by visual materials using multi-media complex, in particular, intelligence maps (mind-maps), are positively perceived by students. *Mind-map (mind mapping)* is a graphic representation of multi-dimension thinking processes. Multi-dimension is a natural characteristic of human brain thinking that is why mind mapping is a powerful visual method giving universal clue to disclosing the potential of each human brain [7].

In the process of preparing and while lecturing, it is necessary to take into account the fact, that the students who have different dominating representation systems: visual, audial, kinesthetic, discrete – perceive information differently. Visual

learners apprehend most of information visually, auditory learners – with acoustic canal; for kinesthetic learners their senses (olfaction, touch, etc.) and movements are important. Discrete learners, who are not numerous, perceive information mainly by logical thinking, with the help of figures, signs, and logical arguments.

Alternating different variants of lecture material presentation – using technical aids, audio-video devices, supporting paper summaries, and others – lecturer has to take into account individual peculiarities of students to perceive information and create corresponding pedagogic conditions for every student to master as much material as possible.

The role of mind-maps in this process is difficult to overestimate, because intelligence maps are one of convenient tools for enhancing the effectiveness of each student's studying considering his (her) individual features. It is a good way of organizing thinking and alternative recording of lecture material.

The methods of presenting separate topics of customs courses using mind-maps ensure the possibility of schematic information representation with keywords, clear structuring of study material. Applying bright visual elements in mind-maps (color schemes, signs, symbols, graphic and text objects) enables future commodity research experts not only to learn and memorize better a large volume of information, but also to see correlations between objects (topics of separate customs courses), which is especially important for future professional activities on the market of customs services.

In our opinion, using mind-map can help enhance the effectiveness of studying and reduce its duration. As a teaching method it favors effective storing, appropriate learning and understanding the necessary volume of information in students' memory. Besides, mind-maps assist in effective making summaries of lectures, teaching and methodical literature, solving creative tasks, conducting trainings, seminars, study and technological practical trainings (Fig. 1).

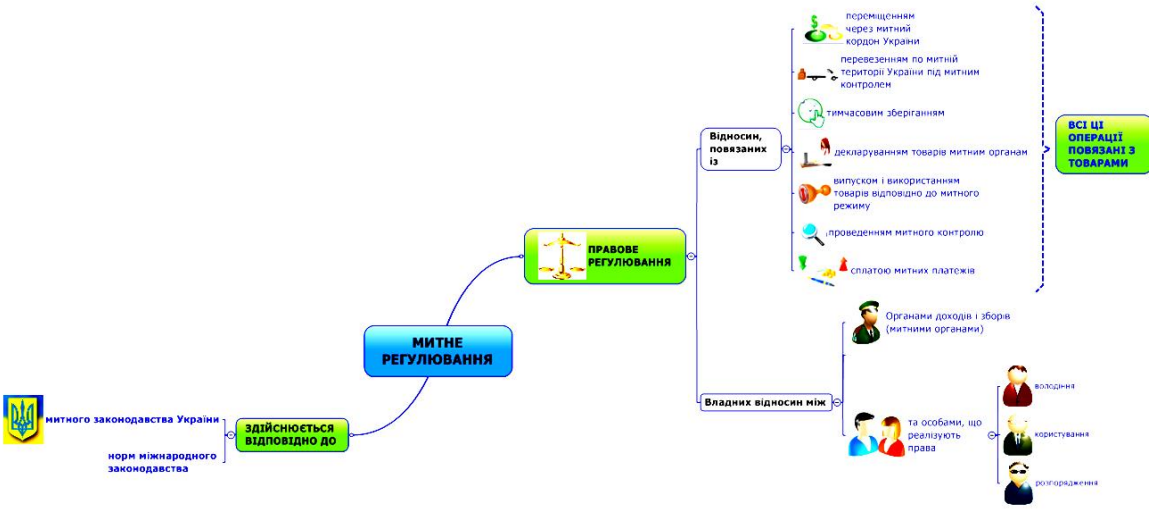

Fig. 1. **Mind-map "Customs regulation"**

As we see, mind-maps are one of appropriate tools for representing the process of thinking and structuring information in visual form. Modern technique of presenting any process or event, thought or idea in complex, systematized, visual (graphic) form with the help of mind-map is a powerful lecturer's means, which helps develop thinking and memory of students, their creative work.

In our opinion, modern lectures are impossible without active using pedagogic tools. Constructing mind-map helps divide the material into elements and, thus, create conditions for its rapid and better memorizing. Lectures, which do not require students' active work, seem to be simple and extremely accessible, decrease listeners' activeness and lead to indifference. It weakens cognitive striving of students and impedes their development.

Teaching material in problem situations using mind-maps makes students think during lecture, and making certain difficulties in studies (informal, but those, which compel to demonstrate creativity) mobilizes students, develops their will and striving to overcome these difficulties. It is worth mentioning, that while giving lectures it is important to complicate difficulties gradually, but in such a way that they can be overcome. This will positively affect students' state of mind and compel them to independent creative work.

Innovative technology of mind mapping, used during lecturing, provides active teaching model, independent students' work, favors the development of creative work and interactive cooperation of students and lecturers. We think that being able to use the technique of mind mapping is absolutely a necessary skill both for instructors and especially for students. Mastering this technique, students at lectures will be able to comprehend the whole picture and using mind-map to reflect in order their thoughts in summary.

It can be concluded that the reflection of thinking process and structuring information in the visual form using mind-maps is a powerful didactic resource in enhancing the effectiveness of modern lectures.

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