

The Contentive criteria of Modular Educational Programs in Preparation Future Specialists on Costume

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Abstract: The field of higher education is the first priority for modern economic development of the country. Improvement of the quality of human capacity and provision of future Kazakhstan with highly skilled workforce is possible only under the condition of modernization of higher education institutions (HEI) in the republic, their integration in the global educational space. The topicality of the research is the study of the content of knowledge for Modular Educational Programs in preparation future specialists on costume. The aim of the study is the analysis of indicators of contentive criterion, based on statistical methodology. The study was done through comparative analysis, based on Kruskal – Wallis test. The results were obtained statistical significance of the differences between different groups of respondents (students, teachers, employers). The most important conclusion allowed to reveal the correlation and dependence on dynamic links. The significance of the results of research is in statistical justification of the Modular Educational Program' content in preparation future specialists on costume and revealing recommendations for higher education institutions of Kazakhstan.

Keywords: preparation future specialists, content, costume, criterion, university education.

Introduction

The background of the problem is an implementation of the reforms in education, which are oriented to the topicality of research - revision of Modular Educational Program' content and renovation of preparation future specialists on costume. Application and possession of methodology of knowledge, as well as practical attainments, refer to relevant previous work (Zhanguzhinova, 2018; Zhanguzhinova et al., 2018) disclosing the integration of the theory and modernization of the practice in accordance with Bologna declaration requirements conditioned by processes of internationalization in education. New mission challenges of Higher Education Institutions in Kazakhstan on preparation specialists reflected in the strategic state program of Kazakhstan - Course towards the future: modernization of Kazakhstan's identity (Akorda, 2017). The aim of the article is an implementation of the direction of education and training of costume specialists, which will cover purpose of research:

- functioning of Modular Educational Programs through the harmonization of the content of educational programs with similar programs of foreign universities-partners; development and implementation of joint educational programs with foreign partners; strengthening the academic mobility of students, faculty members, attracting foreign students to educational programs, inviting foreign professors to guest lectures;
- creating a diversified educational environment that promotes the professional development of students, by providing the quality of educational services: the involvement of students and undergraduates in research projects;
- introduction of advanced international learning experience and strengthening practice-oriented knowledge: stable quality assurance of educational services in the training of highly qualified specialists in accordance with the requirements that can meet the needs and expectations of employers;
- communication of learning, production and science: involvement of stakeholders - employers, teachers, students in the development and implementation of educational programs.

In accordance to update new challenges in education, it has become evident that, for an effective activity in present – day circumstances of transition period, higher education institutions (HEI) should revise the Educational Program's content (Bluma, 2008).

In this regard, the research problem defined is insufficient development and formulation of knowledge content in preparation in HEI of future specialists on costume in Kazakhstan that impedes the integration

into the global educational space. The aim of the study is determination of requirements for the knowledge content in HEI in Kazakhstan.

Research objectives:

1. To develop the Contentive Criteria for the assessment of Professional competence future specialists on costume.
2. To prepare scientifically justified recommendations for the implementation in HEIs of Kazakhstan.

Methodology

The methodology of research bases on statistical study of the implementation of the theoretical training of students on Modular Educational Programs in practical professional activity according to respondents' data (teachers, employers, students). The analysis of dynamics and statistical significance of the differences of Contentive criterion indicators conditioned by the content of Modular Educational Programs for the preparation future specialists on costume. The aim of the research is determination of requirements for the knowledge content for the preparation in HEI in Kazakhstan on the base of statistical analysis (Akorda, 2017), Formation of Professional competence of future specialists on costume and capacity-building in the system of methodical work in Professional education (Zhanguzhinova, 2018).

The research based on the Modular Educational Programs for the preparation future specialists on costume and Methodic of Formation of Professional competence, which includes methods:

- *Theoretical methods:* analysis of Contentive criterion indicators of the Modular Educational Programs on preparation of future specialists on costume.
- *Data collection methods:* questionnaires (for students, teachers, employers).
- *Data processing methods in SPSS.* This article discloses the problem of research in frameworks of descriptive statistics (mean) Kruskal – Wallis test;

The *pilot experimental* research carried out in Kazakhstan from 2008, continued, which included preparatory, ascertaining, formational, controlling stages. The experiment results and the dynamics of development Contentive Criteria were held two questionnaire stages.

- 1) Ascertaining carried out among 107 students of the 3rd study year (control and experimental group) from five higher education institutions of Kazakhstan, with the aim to detect levels of formedness of motivation at the ascertaining stage of the experiment.
- 2) Controlling carried out among 185 respondents divided in three groups: students, teachers, employers, with the aim to trace the dynamics of the motivation in different settings of phased motivation.

Carried out ascertaining stage allowed to identify initial preparation of enrolees. Integration of the proposed Contentive criteria into the research, based on the Methodic on the Formation of Professional competence upon the Modular Educational Program “Costume design” will allow to identify the effectiveness of professional preparation process of future specialists on costume, according to the results of two conducted survey stages (Zhanguzhinova, 2018). The research of the content of Modular Educational Program conditioned by Contentive criterion upon preparation future specialists on costume.

Contentive criterion allows to assess the content of cognitive processes, which suggest the formation of *skills* and understanding of *the content (in this research knowledge of costume)*; general understanding and systemic orientation in theoretical and practical training in design and didactic principles; knowledge of analytical assessment apparatus on the basis of standard education (Creswell, 2014; Adubra, 2014). Assessment of activity effectiveness consists of the main components: acquirement of Professional competencies and experience and attitude (personal characteristics) (Andersone, 2009). Contentive criterion is dependent on mechanisms of process: psychological (knowledge, skills, attitude and changes in the structure of personality and activity) (Bluma, 2008; Holmes, 2013) and functional (forms didactic principles of pedagogical impact) (Dislere, 2012, 206; Zhanguzhinova, 2018). Contentive criterion through the direction of education considers the needs of production, state order, cluster, interests of employers (Zhanguzhinova et al., 2018), by the implementation of innovative technologies on the basis of international quality standard raising and sectoral innovations (Cohen, Manion, Morrison, 2007; Rauhvargers, 2009; Zygaitiene, Buivydaite, 2017).

The study of the theory identified the definition of the term **contentive criterion**, on the basis of the descriptor – content forms skills in the processes: professional preparation, raising of self-education and qualification level, assessment of competencies of specialists ‘on costume. Assessment criteria indicators include: systemic orientation in all design components; knowledge of constructing mechanisms of project-oriented pedagogical process, knowledge of purposeful activity essence of project-oriented pedagogical process, knowledge of design content as a subject of pedagogical process as a subject of pedagogical process, knowledge of project-oriented pedagogical components for the formation of Professional competence; knowledge of criteria on adequate work assessment, knowledge of project-oriented pedagogical conditions (Table 1.).

Table 1

Contentive criterion

№	Indicator name	Code
1.	<i>Systemic orientation in all design components</i>	SKK1
	Awareness of general and individual tasks and aims in knowledge of design basics in discipline cycles (Training curricula) A, B, C, based on interdisciplinary and dynamic links and regularities.	
2.	<i>Knowledge of constructing mechanisms of project-oriented pedagogical process</i>	SKK2
	Application of acmeological, gnoseological, heuristic knowledge in the field of theoretical, project graphical, constructively technological disciplines of design Module “Clothing Design” on the basis of interdisciplinary interrelations.	
3.	<i>Knowledge of purposeful activity essence of project-oriented pedagogical process</i>	SKK3
	Understanding of theoretical aims in the solution of subject-oriented practical tasks, which are established in practice, in work on projects, course works, in student’s practical and self-sustained work.	
4.	<i>Knowledge of design content as a subject of pedagogical process</i>	SKK4
	Orientation in conditions of pedagogical process structuring through the application of interdisciplinary link opportunities and universality of regularities of harmonization in design, considering that work on a project requires systematicity.	
5.	<i>Knowledge of project-oriented pedagogical components for the Formation of Professional competence</i>	SKK5
	Identification of specific of each discipline of Module: Colour introduction identifies the knowledge on harmonization of colour combinations; Project graphic forms taste, analysis, knowledge of composition and graphic; Costume design conducts practical realization of knowledge on clothing design, modelling, construction.	
6.	<i>Knowledge of criteria on adequate work assessment</i>	SKK6
	Is formed as a result of analysis, prediction, comparison with other models; objective and subjective assessment is formed on the basis of a broad spectrum of knowledge and development of analytical assessment apparatus of Future Specialists on Costume.	
7.	<i>Knowledge of project-oriented pedagogical conditions</i>	SKK7
	Knowledge application in educational training process – is formed on the basis of normative, pedagogical and professional conditions.	

The research of theories revealed, that the introduction of the indicators of Contentive criterion in professional preparation of students in HEI can help to reveal problems and their solutions through dynamic links of Methodic of Formation of Professional competence:

- “sectoral innovations” in education;
- “education standard” of professional preparation in HEI;
- “education paradigm” in training of specialists;
- “mechanisms of process” of pedagogical process;
- “direction of education” in HEI;
- “organization of training” in pedagogical process (Zhanguzhinova et al., 2018).

Results and Discussion

For a better representation of dynamics and contentive description by the basic statistical indicators, descriptive statistics (mean) were applied. The results of two questionnaire stages are systematized in Excel program and processed in SPSS program. The analysis is conducted on contentive criterion.

Using the results of statistical analysis with all seven contentive criterion indicators, consequent positive dynamics (Figure 1), (Table 2) and dependence on dynamic links is identified:

1. systemic orientation in all design components; dynamic link No.2 “education standard”;
2. knowledge of constructing mechanisms of project-oriented pedagogical process; dynamic link No.4 “mechanisms of process”;
3. knowledge of purposeful activity essence of project-oriented pedagogical process; dynamic link No.5 “direction of education”;
4. knowledge of design content as a subject of pedagogical process; dynamic link No.2 “education standard”;
5. knowledge of project-oriented pedagogical components for the formation of Professional competence; dynamic link No.4 “mechanisms of process”;
6. knowledge of criteria on adequate work assessment; dynamic link No.3 “education paradigm”;
7. knowledge of project-oriented pedagogical conditions and their use in educational and training process; dynamic link No.1 “sectoral innovations”.

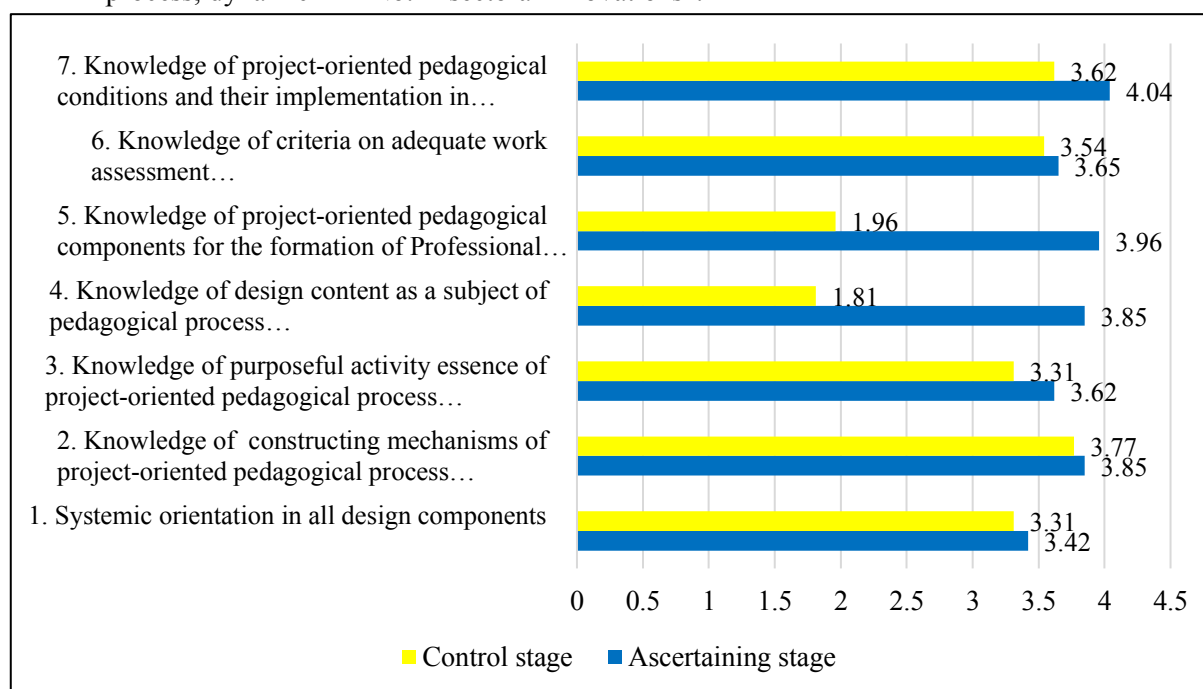


Figure 1. Dynamics of the indicator of contentive criteria.

Based on Kruskal – Wallis test, the comparative analysis of the indicators of contentive criterion of the Formation of Professional competence of all the respondents (students, teachers, employers) (Table 2.) showed that:

- statistically maximum significant differences were observed on the following variables: *knowledge of constructing mechanisms of project-oriented pedagogical process* ($p=0.000$); *knowledge of purposeful activity essence of project-oriented pedagogical process* ($p=0.000$); *knowledge of criteria on adequate work assessment* ($p=0.000$);
- statistically very significant differences were observed on the following variables: *knowledge of design content as a subject of pedagogical process* ($p=0,004$); *knowledge of project-oriented pedagogical components for the formation of Professional competence* (0.009);
- statistically significant differences were observed on the following variable: *knowledge of project-oriented pedagogical conditions and their use in educational and training process* (0.026).

Knowledge of constructing mechanisms of project-oriented pedagogical process among the students has the highest score (Mean Rank 45.90), while the employers were identified with the lowest score

(Mean Rank 73.68). The responses of the students characterize the well-formedness of the conditions (normative, pedagogical, professional). The employers express dissatisfaction with professional preparation of students in HEI, highlighting the weak organization of the Formation of Professional competence.

Table 2

Statistical significance of the differences of contentive criterion indicators among the respondents

Code	Indicators of the assessment criteria	p	Highest score (Mean Rank)	Respondents	Lowest score (Mean Rank)	Respondents
SKK3	Knowledge of purposeful activity essence of project-oriented pedagogical process	0.000	46.56	students	73.52	employers
SKK4	Design content knowledge as a subject of pedagogical process	0.004	46.15	students	69.98	employers
SKK5	Knowledge of project-oriented pedagogical components for the formation of Professional competence	0.009	47.62	teachers	68.77	employers
SKK6	Knowledge of criteria on adequate work assessment	0.000	41.64	students	75.14	employers
SKK7	Knowledge of project-oriented pedagogical conditions and their application in educational and training process	0.026	46.96	teachers	66.91	employers

Knowledge of purposeful activity essence of project-oriented pedagogical process, according to the students, has the highest score (Mean Rank 46.56), while the employers identify the lowest score (Mean Rank 73.52). It indicates the well-formedness of theoretical competence of future specialists on costume and application of them in project-oriented pedagogical process. The employers pointed at the weaknesses of the organization of the process of Formation of Professional competence due to a low level or lack of interdisciplinary relations, requirements, technologies, which structure theoretical knowledge, skills, attitude of students.

Knowledge of criteria on adequate work assessment of the students has the highest score (Mean Rank 41.64), while the employers identify the lowest score (Mean Rank 75.14). According to the students, they possess knowledge of criteria on adequate work assessment (motivational, contentive, procedural). However, the employers identify imperfection of the process of professional preparation in HEI and the organization of the Formation of Professional competence, dependent of the Model and the Methodic.

Knowledge of design content as a subject of pedagogical process has the highest score among the students (Mean Rank 46.15), while the employers identified the lowest score (Mean Rank 69.98). The students characterize the well-formedness of their theoretical knowledge, skills, attitude and the organization of the process of Formation of Professional competence in the professional preparation in HEI. According to the employers, students show a low level of theoretical preparedness on knowledge, skills, attitude, as their orientation in design content as a subject of pedagogical process is poor.

Knowledge of project-oriented pedagogical components for the formation of Professional competence is defined by the teachers with the highest score (Mean Rank 47.62), while the employers identified the lowest score (Mean Rank 68.77). The teachers characterize the well-formedness of theoretical knowledge, skills, attitude of students in the solution of subject-oriented practical tasks, their application in design in professionally-pedagogical activity and in the organization of processes of professional preparation in HEI, dependent on the Model and the Methodic. However, the employers assessed students' knowledge of project-oriented pedagogical components for the Formation of Professional competence less positively, as they identified their inability to apply it in the process of professional activity.

Knowledge of project-oriented pedagogical conditions and their use in educational and training process is identified by the teachers with the highest score (Mean Rank 46.96), while the employers assess it less

positively (Mean Rank 66.91). The teachers characterize the well-formedness of the characteristics (normative, pedagogical, professional), dependent on the Model and the Methodic in the organization of the process of Formation of Professional competence. The employers summarize the imperfection of the organization of the process of Formation of Professional competence during the professional preparation in HEI. According to the result of the second questionnaire, the effectiveness of the implementation of the Methodic on the basis of Modular education programme is identified among the respondents on the indicators of contentive criterion: *systemic orientation in all design components* (Zhanguzhinova, 2018). It identified the dependence on activity-oriented organizational regularity and dynamic links: education standard.

Based on Kruskal – Wallis test, the comparative analysis of the indicators of contentive criterion among the respondents (students, teachers, employers), identified the lowest scores in: *knowledge of constructing mechanisms of project-oriented pedagogical process; knowledge of purposeful activity essence of project-oriented pedagogical process; knowledge of design content as a subject of pedagogical process; knowledge of project-oriented pedagogical components for the Formation of Professional competence; knowledge of criteria on adequate work assessment; knowledge of project-oriented pedagogical conditions and their use in educational and training process.*

It identified vulnerability in dynamic links: mechanisms of process, direction of education, education standard, education paradigm, sectoral innovations.

Correlation, which indicates average interrelation, is identified between *systemic orientation in all design components* and:

- *possession of theoretical knowledge on Costume design* ($r=0.580$);
- *knowledge of constructing mechanisms of project-oriented pedagogical process* ($r=0.557$);
- *possession of project-oriented pedagogical process providing technology* ($r=0.498$).

Therefore, correlation identified the dependence on dynamic links: education standard, education paradigm, mechanisms of process.

It characterizes the interdependence of the indicators, which correlate with systemic orientation in all design components, on the basis of regularities, dynamic links and pedagogical interactions.

Correlation, which indicates high interrelation, is identified between *knowledge of constructing mechanisms of project-oriented pedagogical process* and *knowledge of purposeful activity essence of project-oriented pedagogical process* ($r=0.738$).

Correlation identified the dependence on dynamic links: mechanisms of process, direction of education.

Correlation, which indicates average interrelation, is identified between *knowledge of constructing mechanisms of project-oriented pedagogical process* and:

- *knowledge of project-oriented pedagogical components for the Formation of Professional competence* ($r=0.632$);
- *possession of construction of project-oriented pedagogical process* ($r=0.613$);
- *knowledge of project-oriented pedagogical conditions and their use in educational and training process* ($r=0.611$);
- *possession of practical knowledge on Costume design* ($r=0.606$);
- *possession of project-oriented pedagogical process providing technology* ($r=0.556$);
- *knowledge of criteria on adequate work assessment* ($r=0.562$);
- *possession of theoretical knowledge on Costume design* ($r=0.571$);
- *knowledge of design content as a subject of pedagogical process* ($r=0.589$).

Correlation identified the dependence on dynamic links: mechanisms of process, sectoral innovations, education paradigm, education standard.

Correlation, which indicates high interrelation, is identified between *knowledge of purposeful activity essence of project-oriented pedagogical process* and *knowledge of design content as a subject of pedagogical process* ($r=0.728$).

Correlation identified the dependence on dynamic links: direction of education, education standard.

Correlation, which indicates average interrelation, is identified between *knowledge of purposeful activity essence of project-oriented pedagogical process* and:

- *knowledge of project-oriented pedagogical components for the Formation of Professional competence* ($r=0.678$);
- *knowledge of criteria on adequate work assessment* ($r=0.610$).
- *knowledge of project-oriented pedagogical conditions and their use in educational and training process* ($r=0.579$).
- *possession of construction of project-oriented pedagogical process* ($r=0.576$).

Correlation identified the dependence on dynamic links: direction of education, mechanisms of process, education paradigm, sectoral innovations.

Correlation, which indicates average interrelation, is identified between *knowledge of design content as a subject of pedagogical process* and

- *skill to organize all activity types, related to Costume design* ($r=0.505$);
- *possession of project-oriented pedagogical process providing technology* ($r=0.503$).

Correlation identified the dependence on dynamic links: education standard, direction of education, mechanisms of process.

Correlation, which indicates average interrelation, is identified between *knowledge of project-oriented pedagogical components for the formation of Professional competence* and:

- *knowledge of project-oriented pedagogical conditions and their use in educational and training process* ($r=0.616$);
- *knowledge of criteria on adequate work assessment* ($r=0.612$);
- *possession of theoretical knowledge on Costume design* ($r=0.517$).

Correlation identified the dependence on dynamic links: sectoral innovations, education paradigm. Correlation, which indicates average interrelation, is identified between *knowledge of criteria on adequate work assessment* and:

- *knowledge of project-oriented pedagogical conditions and their use in educational and training process* ($r = 0.491$);
- *possession of theoretical knowledge on Costume design* ($r = 0.520$).

Correlation identified the dependence on dynamic links: sectoral innovations, education paradigm. Correlation, which indicates average interrelation, is identified between *knowledge of project-oriented pedagogical conditions and their use in educational and training process* and:

- *possession of project-oriented pedagogical process providing technology* ($r=0.623$);
- *possession of theoretical knowledge on Costume design* ($r=0.525$).

Correlation identified the dependence on dynamic links: mechanisms of process, education paradigm.

Conclusions

Based on the results of the questionnaire of students, teachers, employers and Kruskal – Wallis test comparative analysis of the indicators of the Criteria for the formation of Professional competence, statistical significance of differences is identified – in contentive criterion, the effectiveness of the implementation of the Methodic on the basis of Modular education programme is identified among the employers on the indicators of contentive criterion: *systemic orientation in all design components*.

For the development of Modular Educational Programs, it's necessary reconsideration of the professional preparation of future specialists on costume in Kazakhstan's HEI. According to the provided research, the following recommendations were revealed:

- to make additions to the normative framework education programs on the modernization of the approaches in training in HEI into “**education standard**”. This renovation can contribute functioning of Modular Educational Programs through the harmonization of the content of educational programs with similar programs of foreign universities-partners;
- the creation of the opportunity of self-sustained students' choice of training trajectory in HEI (according to the principles of Bologna declaration, students have the right to plan their training individually) in “**direction of education**”. This can improve creation of the diversity of educational environment, that promotes the professional development of students, by providing the quality of educational services;

- to make changes and additions into “**sectoral innovations**” in education:
 - 1) in the aims and the content of theoretical preparation and practice on the basis of sectoral innovations in education for the realization of all competence types; this can attract the advanced international learning experience and strengthening practice-oriented knowledge;
 - 2) in the assessment of competencies on the basis of proposed motivational criteria for formation of the prestige of profession;
 - 3) in content of the education programmes, which increase the scope for the acquisition of subject-oriented knowledge, skills, attitude and subject-oriented practical and profile orientation of preparation;
- to organize the pedagogical interaction of students, teachers, employers for the effectiveness of institutional education reforms in Kazakhstan on the basis of Bologna declaration. This can create the communication of learning, production and science;
- to create of flexible conditions for international academic mobility and planning of the content of education for sectoral needs in realization the Formation of Professional competence in educational and productive processes.

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