

## TEACHING PEDAGOGICAL FORECASTING TO FUTURE ACTORS-INSTRUCTORS

**Prof. dr hab. Alla Matuszak<sup>1</sup>**

**Lecturer: Elena Tsalko<sup>2</sup>**

**Prof. dr hab. ing. Zbigniew Matuszak<sup>3</sup>**

<sup>1</sup>South Ural State Humanitarian Pedagogical University, Russian Federation

<sup>2</sup>South Ural State Institute of Arts named after P. Tchaikovsky, Russian Federation

<sup>3</sup>Maritime University of Szczecin, Poland

### ABSTRACT

The requirements to future specialists in professional education accentuate the qualities of their adaptability, constant self-improvement, capacity to adjust to the new demand in the profession. These qualities are especially important for students of pedagogy and art preparing for the career of actors-instructors, i.e. instructors teaching children acting in school theatres. The actors-instructors' ability to competently foresee the tendencies in their profession, to prognosticate the ways to teach their pupils seems most effective on the basis of teaching pedagogical forecasting to students. Pedagogical forecasting is viewed as the scientifically grounded activities aimed at investigating possible transformations, development trends and prospects of objects in pedagogy and education. Three aspects of pedagogical forecasting are applied in the activities of future actors-instructors: forecasting students' own leaning, forecasting and designing classes in the process of pedagogical practical training (quazi-professional activities) and teaching forecasting to pupils during practical training in schools.

The present paper introduces the concept and structure of pedagogical forecasting in the activities of future actors-instructors. The levels of pedagogical forecasting in the activities of future actors-instructors are described. The criteria to measure the prognostic competency of future actors-instructors are shown. The model of pedagogical forecasting in the activities of future actors-instructors is introduced. The experimental research conducted in a higher school in the Urals in 2013-2017 illustrates the system of activities to prepare future actors-instructors to apply pedagogical forecasting in their profession. The process of future actors-instructors training to organize pedagogical forecasting is shown. The methodology to analyze the pedagogical forecasting in the activities of a future actor-instructor includes case study, educational experimentation. Data collecting and processing is based on conversational interviewing. The data collecting method is carried out to study the higher school staff opinions about the actual level of future actors-instructors' pedagogical forecasting. Statistical data processing was performed in the MS Excel 2010 environment. A comparison of the distribution of nominative variables was made using the  $\chi^2$  Pearson Fitting Criterion with a sample size ( $n \geq 100$ ).

***Keywords: pedagogical forecasting, professional training, future actors-instructors***

## INTRODUCTION

Educators should be able to forecast their activity as well as the activity of their students. This requirement also concerns actors-instructors, that is teachers training pupils acting in school theatres, conducting classes in extra-curricular education for children. The skills of forecasting assist instructors in acquiring adaptability, achieving self-improvement, learning capacity to adjust to the new demand in the profession. The actors-instructors should predict the tendencies in their profession, plan techniques to teach their pupils. All these activities are based on pedagogical forecasting. Pedagogical forecasting aimed at predicting trends and prospects of objects in pedagogy and education [8], has been studied in many works on instruction. A.L. Leutina has described pedagogical aspects of social forecasting in socialization [7]. Teaching undergraduate students forecasting and methods of forecasting applied in education have been considered by A. Matuszak & Z. Matuszak [8].

General issues and technology of forecasting were studied by scholars all over the world. C.W.J. Granger (US) & Y. Jeon (South Korea) studied long-term forecasting and evaluation [4], P. Buckley & E. Doyle (Ireland) showed ways of integrating a collaborative forecasting tool called “a prediction market” into an educational context [1], N.L. Kerr (US, UK) & P.S. Tindale (US) focused their attention on group-based forecasting [5]. Issues of strategic forecasting were investigated by E. Perycz (Poland) [9], prognostic aspect of students’ mentality has been studied by Shishova E., Varlamova E. (Russian Federation) [11], forecasting competence was the object of studying by Kuznetcova E.A., Akhmetzyanova A.I., Nigmatullina I.A. (Russian Federation) et al. [6].

This paper aims at showing the process of teaching forecasting to future actors-instructors. The research questions of the paper are: 1) *What is the structure of pedagogical forecasting in the activities of future actors-instructors?* 2) *What model of activities might be applied in teaching forecasting to future actors-instructors ?* 3) *What are the criteria to determine the levels of prognostic competency of future actors-instructors?* 4) *What is the model’s impact on the level of future actors-instructors’ pedagogical forecasting?*

## RESEARCH METHODOLOGY

To study the pedagogical forecasting in the activities of future actors-instructors case study and pedagogical experiment have been applied. Case study means that the selection of a higher school is purposeful. The selection envisages a higher school typical for Ural, licensed and accredited by the State. The higher school chosen for the research meets the requirements of the Regional Ministry of Culture and the employers.

Educational experiment has lasted five years (2013-2017). The “pretest-post-test control and experimental group design” [2] has been chosen.

Data collection techniques included testing and conversational interviewing. The tests allowed measuring actors-instructors’ skills and knowledge of pedagogical forecasting. Data sets have also been obtained from opinions about

the students' professional qualities necessary for prognostic competency. To prove the validity of the data sets data source triangulation has been referred to.

Statistical data processing was performed in the MS Excel 2010 environment. A comparison of the distribution of nominative variables was made using the  $\chi^2$  Pearson Fitting Criterion with a sample size ( $n \geq 100$ ).

### **SAMPLE**

The data have been obtained from future actors-instructors (n=130), teaching staff of the higher school conducting classes in the given group of actors-instructors (n=5), in-service teachers observing students in teaching practice (n=5).

The future actors-instructors are undergraduate students in the first, second and third year. 10% of the students have participated in competitions in acting. The teaching staff consists of teachers with the experience in their profession of more than 15 years. In-service teachers observing students in teaching practice have the experience over five years.

### **CASE STUDY**

The principles of case study have been considered in literature [2], [10]. In the research a higher school providing training in graduate programs in the sphere of arts has been selected. It is a higher educational institution typical of higher schools training artists, actors, musicians.

1. The first criterion to select the higher school is the number of training programs in Arts. The higher school represented in the research provides training on two levels: undergraduate (nine directions), doctoral (ten direction).

2. The second criterion is the general characteristics of the institution. The higher school is situated in a city with the population of over a million citizens. The higher school is well-equipped with halls, musical instruments. All the training programs in the higher school are licensed by the Regional Ministry of Culture and accredited by the State.

### **EXPERIMENTAL RESEARCH**

*The first research question* concerns the structure of pedagogical forecasting in the activities of future actors-instructors. In the structure of pedagogical forecasting we have distinguished three components: cognitive, instrumental and value-oriented. The cognitive component includes the knowledge of forecasting terminology, forecasting process and methods of pedagogical forecasting. The instrumental component consists of the skills to predict own learning outcomes, to plan instruction process, to analyze the outcomes of forecasting. The value-oriented component envisages developing in students the qualities of artistic taste the student's being aimed at professional growth, prognostic character of professional thinking.

To teach these components of forecasting the model of pedagogical forecasting in the activities of future actors-instructors has been suggested. The description of the model is the task which stems from *the second research question* According to the model the activities have been planned in three phases.

*Phase 1 is Propedeutical.* It is aimed at future actors-instructors' gaining forecasting knowledge and elements of forecasting skills. It includes the following activities.

1. Students' making up exercises in classes of acting.
2. Forecasting in acting out situations. E.g., act out the work of experts choosing the best etude."
3. Imitation role playing on the topic "Refereeing in acrobatics".
4. Planning and performing variety etudes.
5. Tasks for students, e.g. "You are on practical training in an amateur theatre for kids. Schedule your work." "Predict the qualities necessary for the child-actor to perform a given part in the play".
6. Making pretest predictions and posttest estimations in own learning.

*Phase 2 is Educational.* It includes activities to train forecasting skills and the process of forecasting. These are: pre-forecasting orientation, setting the task for the forecast, forecasting retrospection, forecasting diagnosis, forecasting prospectus, verification, correction.

1. Pre-forecasting orientation consists in carrying out the work preceding the development of the forecasting assignment. The forecaster determines the goal, the object of forecasting, considers the period of foundation and the period of anticipation of the forecast. For example, actors-instructors make lesson plans. The pre-forecasting orientation includes acquaintance with the educational process in the group of children, getting familiar with the methods and techniques of work used in this group earlier, the children' response to the proposed tasks.

2. Setting the task for the forecast. The task for the forecast can be a document regulating the procedure for planning etc. This component of pedagogical forecasting is optional.

3. Forecasting retrospection. At this stage the forecast background is investigated. In the work of actors-instructors this stage is part of pre-forecast orientation.

4. Forecasting diagnosis assumes the setting of the forecasting purpose and the choice of methods.

5. Forecasting prospectus. The content of the stage includes a decision about the skills to be worked out, on the methods of working on their own activities.

6. Verification of the forecast. This is the stage of assessing the reliability and accuracy of the forecast, as well as its validity. At the verification stage, the level of actors-instructors' skills is made.

7. Correction of the forecast. It is based on the results of verification of the forecast. It begins a new forecasting cycle. If the previous stage has shown a high level of accuracy and reliability of the forecast, the forecast background has been correctly defined. Verification of the prognosis is a pre-forecasting orientation, forecasting retrospection and partially forecasting diagnosis of the next forecasting cycle.

*Phase 3 is Practical Training.*

Practical training is aimed at the reinforcement of forecasting skills and professional qualities of a forecaster. In the organization of practical training three types of tasks are envisaged. The first type includes tasks of imitating

professional situations. The second type is based on training qualities necessary for effective forecasting. The third type includes tasks to train all the aspects of pedagogical forecasting in the activities of future actors-instructors: forecasting students' own learning, forecasting and designing classes in the process of pedagogical practical training (quazi-professional activities) and teaching forecasting to pupils during practical training in schools.

## FINDINGS

The answers to the remaining research questions have been disclosed in this part. *What are the criteria to determine the levels of prognostic competency of future actors-instructors? What is the model's impact on the level of future actors-instructors' pedagogical forecasting?*

The evaluation of the level of future actors-instructors' pedagogical forecasting the following criteria stemming from the components of forecasting have been taken into consideration. The criteria include: the knowledge of forecasting terminology (C-1), the knowledge of forecasting process (C-2), the knowledge of methods of pedagogical forecasting (C-3), the skills to predict own learning outcomes (C-4), the skills to plan instruction process (C-5), the skills to analyze the outcomes of forecasting (C-6), the developing in students artistic taste (C-7), the quality of the student's being aimed at professional growth (C-8), prognostic character of professional thinking (C-9).

In the process of the research to measure knowledge (criteria C-1 – C-3) conversational interviewing with students has been implemented. To measure skills (C-4 – C-6) and professional qualities (C-7 – C-9) conversational interviewing with experts (higher school teachers and school teachers from institutions engaged in students' practical training) has been applied.

In the process of assessment each criterion was attributed one of the values: 1 – low, 2 – medium, 3 – high. Consequently, the level range is 9 – 27. The low forecasting level was attributed the range 9 – 14, the medium level was 15 – 20, the high level was 21 – 27. The assessing procedure technique is presented in Table 1.

Data about the students' levels of forecasting in the experimental group (EG) and the test group (TG) were measured before the model implementation (Table 1) and after the experiment (Table 2).

*Table 1. Future actors-instructors' forecasting levels before the experiment*

Group	Future actors-instructors	Levels					
		high		medium		low	
		number	%	number	%	number	%
EG	60	2	3.3	21	35.0	37	61.7
TG	70	1	1.4	24	34.3	45	64.3

Source: own study

To measure the model’s impact on the level of future actors-instructors’ pedagogical forecasting chi-square testing was implemented. Before the experiment, we assumed that the levels of pedagogical forecasting in the TG and EG are not statistically significant. Confidence limits for the  $\chi^2$  criterion with the degree of freedom  $v = 2$  for significance levels of 0.05 and 0.01 are [3]: 5.991 for  $p \leq 0,05$  and 9.210 for  $p \leq 0.01$ . Applying  $\chi^2$  criterion, we compared the results of the state of forecasting levels in EG and TG. The empirical value of  $\chi^2$  is 0.5478. It is significantly less than the  $\chi^2_{critical}$  value, which means that the difference between the forecasting level in EG and TG before applying the model is not statistically significant.

Table 2. Future actors-instructors’ forecasting levels after the experiment

Group	Future actors-instructors	Levels					
		high		medium		low	
		number	%	number	%	number	%
EG	60	7	11.7	38	63.3	15	25.0
TG	70	2	2.9	24	34.3	44	62.8

Source: own study

After the experiment the empirical value of  $\chi^2$  is 19.539, that is more than  $\chi^2_{critical}$ . It means that the changes recorded after the experiment are not accidental and are significant at the 1% level. The higher forecasting level in EG is due to the model implementation.

**DISCUSSION**

In the process of testing future actors-instructors showed knowledge and skills of forecasting. Testing disclosed the formal aspect of knowledge and skills, e.g. the ability to enumerate methods, forms and procedures of forecasting. The effect of forecasting (accuracy) was learned from conversational interviewing. University staff proved more demanding in assessing skills and professional qualities of future actors-instructors.

The problematic aspect of teaching forecasting to future actors-instructors concerned their professional priorities. They considered acting as their major, while instruction was perceived as their additional qualification. Consequently, their engagement in the forecasting of their own leaning was more accurate than forecasting and designing classes in the process of pedagogical practical training and teaching forecasting to pupils during practical training in schools.

Professional qualities necessary were developed quite unevenly. Due to the fact that students considered acting as heir major, the quality of artistic taste was shown on sufficiently high level. So was the student’s being aimed at professional growth. The least developed seemed the prognostic character of professional thinking.

## CONCLUSION

The paper addressed four research questions. Answering the first research question it was stated that in the structure of pedagogical forecasting there are three components: cognitive, instrumental and value-oriented.

In answering the second research question we suggested a model to teach forecasting to future actors-instructors. It includes activities in three phases. Phase 1 (“Propedeutical”) is aimed at future actors-instructors’ gaining forecasting knowledge and elements of forecasting skills. Phase 2 (“Educational”) includes activities to train forecasting skills and the process of forecasting. Phase 3 (“Practical Training”) is aimed at the reinforcement of forecasting skills and professional qualities of a forecaster.

The criteria to determine the levels of pedagogical forecasting include the knowledge of forecasting terminology, forecasting process and methods of pedagogical forecasting; the skills to predict own learning outcomes, to plan instruction process, to analyze the outcomes of forecasting; developing in students the qualities of artistic taste, the student’s being aimed at professional growth, prognostic character of professional thinking.

The chi-square testing showed that the experiment aimed at special training to teach forecasting to future actors-instructors’ has been effective. The suggested model is sufficient to achieve the goal of teaching forecasting to future actors-instructors.

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