Use of Gamification as a Means of Consulting Support for Continuous Professional Development of Teachers

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Abstract: The article presents the results of the research conducted on the pedagogical faculty of Baranovichi State University on the creation of the university consulting service as an internal service to assist university teachers in solving problems of their professional practice. Gamification is presented as a form of consulting support of the process of teacher professional development directly at the workplace. Game simulation interaction influences the formation of the teachers' need for constant reflexive estimation of their activities. An educator recognizes the need for innovative change, which requires the constant study of educational activities implementation. The usage of experimental model simulation as real phenomena in pedagogical activity creates optimal conditions and prerequisites for teachers research competencies formation. It helps to produce innovative solutions in problematic situations, which may arise in the particular teacher activities. In game simulation the process of participants' personal development is intensified.

Keywords: continuous education, teacher professional development, adult education, consulting support, gamification.

Introduction

Competition in all spheres of social development provokes an educational demand for the use of technologies of high-speed continuous education by a modern teacher, ensuring the constant development of its subjects in accordance with the changing society, which is inherent in the trend of innovative development.

The transition of universities in the XXI century was accompanied by significant growth of their functions: in addition to teaching, studying and scientific researches there were actualized advisory services (internal and external) for further training (Asaad et al., 2013; Barber, 1997, 17; Realising the European..., 2003; Bologna Declaration, 1999; Bolz, 2015, 13). Realization of the principle of universal accessibility was actualized and intended the creation of forms of higher education, meeting all possible circumstances of one's life: partial or distance learning, short-term courses, independent study courses (BECTA, 2003; Common European Principles..., 2009; Kepaliene, Žygaitienė, Jakovleva, 2016; Rivero, Padrón, Izaguirre, 2012).

We support the opinion of researchers that the value of knowledge, human and intellectual capital is tested in different activities. As knowledge quickly becomes obsolete, learning must be continuous (Bogdanowicz, Bailey, 2001, 20; Kozina, Erjavšek, Kostanjevec, 2015; Kriz, 2014).

Accordingly, teachers, as subjects of educational process, have a constant need to consult on the implemented professional practice, which can be satisfied, by the consulting as an internal service of an educational institution.

We agree with the opinion of the researchers that in order to ensure the continuity of the professional development of teachers, the staff of the educational institution in which they work should be transformed into a community of communicating practitioners [trainers and trainees] (Danielson, 2016, 19), who discuss the problems of implemented educational processes in collegial conversations, without violating existing rules and regulations (Macheridis, Paulsson, 2019, 479-481).

The modern university teacher has to be constantly in the position of a researcher to meet all students, society and his personal needs. The latest ones are quite significant, as the psychological comfort of everyday professional activity ensures the success of its results. The effectiveness of the existing work system with the teaching staff nowadays is significantly dependent on the ability of filling it with new methods and forms, able to provide professional specialist development, adequate to changing operational conditions.

In the following research, we adhere to the position of modern training analysts (O.S. Anisimov, G.S. Suhobskaja, P. Drucker, R. Lynch) who characterize the teaching career as management (Anisimov, 2009; Drucker, 2007; Kuljutkin, Suhobskaja, 2013; Lynch, 2005).

In offering consulting as a mechanism for implementing continuing education of the teacher directly at the workplace, we rely on the results of the research carried out by K. Cook, K. Garza, N. Gray, M. Gerich, M. Mundy, L. Kupczynski, B. Schmitz, J. Smith (Cook, 2018; Smith, Gray, 2017; Gerich, Schmitz, 2016; Garza, Mundy, Kupczynski, 2018).

The purpose of our research is to substantiate the expediency of using the pedagogical technology of consulting, the main form of implementation of which is gamification, to support the process of continuous professional training of a teacher directly at the workplace.

Methodology

Initially the essence of the university education functioning was to preserve the intellectual profession in the human community (Jaspers, Rossman, 2013, 115). Such kind of functional tasks solving guaranteed the implementation within the university professional practice and research activities contributing to the creation of a new secular culture (Carroll, 2004, 22).

Within the study of the consulting function of the University, we believe that every teacher performs the role of a manager of his own activities, the activities of his students and the procedure of interaction between the participants of an organized process. When implementing the consulting function of the University it is expected to provide an expert assistance to specific teachers during their introduction of innovations in their ongoing training and education processes. The priority demands for analytical support management activities determined by the fact that the real professional competence of the management should not be a negative factor in teaching. Stabilization management activities are provided by the opportunity to integrate technology with teaching analytical activities. The fundamental condition for the implementation of vocational education in the world community is the improvement of the culture decision-making level with the following implementation in the adequate way.

As a means of forming of a university lecturer competence on the study implemented in their own professional innovation activity, we propose a procedure of play models, which is implemented through the series of specially organized play models events. Their content is a response to a problem or a crisis in the professional activities of a given teacher of a particular educational institution, the implementation of the installation is to improve and develop the activity and the educational system itself. The purpose of the play model event organization can also be installed on the qualitative improvement of professional and other qualities of an expert. Play model simulation can be performed in order to get additional empirical data, to implement a theoretical problem, to create an experimental model and test a theoretical hypothesis.

We support researchers in the fact that the knowledge that employees possess is a key source of sustainable competitive advantage for educational institutions (Bogdanowicz, Bailey, 2001, 21).

Play technology reproduce the interaction of real situations and relationships of participants in the model variant and construct these situations and relations as a model systems prototype. Reflexive support of all play actions creates opportunities for research, analytics, consulting, forecasting systems and development processes.

The professional activity and the accompanying participants interaction of play model events is subjected to gamification in the form of opposition and communication. In a play model events self-organizing of a participant includes the creation for himself and for the partners subjectively meaningful standards and responsibility for their implementation. Description reincarnated in prescription and requires the participant to change the type of behaviour and self-organization (Anisimov, 2009, 23).

The number of factors affecting the specific behaviour of a participant and their interaction is open to extend. The effect of a play process influences the participants and predetermined by characteristics of relationships and actions of participants at each other. During its implementation the process of socialization and acculturation runs more rapidly than in usual conditions (Anisimov, 2009, 341).

Due to its structural uncertainties, contingencies and variance play model interaction with its game approach allows participants to accept any activities, even those unrealistic and meaningless from their individual point of view. They begin to do the game activities, and therefore irresponsible enough, according to uncertain plan which allows fulfilling mistakes. As a result, there occurs a necessary situation for a free search for change, improvement and development of organizational forms, means, methods and mental activity techniques.

Using logic terms, the participants agree that what are they talking about is the subject of thoughts, and – how are they talking about is the predicate. The "Life" of a predicate in play model may be represented by the following sequence: identification of the predicate with the subject – separation in case of their inadequacy – predicate function return as a mean of thought – its return to the state of being out of use – the search for additions or refinements that would describe the subject – replacing of the original predicate (Anisimov, 2009, 344).

This algorithmic scheme expresses the technological aspects of activities implementation to resolve educational problems. It can be done either in the form of a research or in empirical way.

A consultant organizes a group from one communication stage to another (consultant logic operations positions are borrowed from a play technician). Technology schematization is adopted by the event participants during a play model at their own pace and mode. In moments of difficulties concerning the need for a schematic representation of the players way of thought, the consultant provides (with the obligatory explanation) methodologically developed tools – the alphabet and the alphabet schemes.

In the evening after the whole working day each group makes a report at the next plenary session (in schematic language only). Other participants ask questions to the report issues and express their critical judgments. The critics result is the subject of further analytical work in groups. Thus, each group receives full feedback from all the other play model participants, which allows them to improve and modify their proposed problems solutions. This mode of operation requires the utmost concentration of its participants. Constant readiness (concentrating on work) leads to the play models activity intensity.

Educational processes implementation in the form of play model suggests the participants to be in the role of researchers. The necessary precondition for modelling research order is the presence of practical activities difficulty the removal of which requires the formation of the phenomenon theoretical concept in action.

In the play model event a player is provoked to improve his own development and the need for the state of development itself. He is involved in an unusual state, and at some point, is forced to undergo cycles of development and for the reflection (Anisimov, 2009, 109). Play model event as a special socio-cultural and active mechanism assigns a function of collection of life problematic situations, socio-cultural interactions in the practice of professional activities. Its scenic design is directed at overcoming of an accidental problematic situation and creating it as a fundamental and profound.

University professors as players can stay both in the positions of an "actor" or "audience." They have to follow the deepening and disengagement of external evidence (which is typical for the empirical view of reality) and deepness of the essence (which is typical for the theoretical view of reality).

Every single play model interaction due to its afore-mentioned features is a "model" and a teacher (no matter whether he is an actor or a spectator) goes from empirical experience to essentially theoretical version and takes into account both views, uses the advantages in order to get to the bottom of the issues and get the answers.

Making and remaking of the scenario of real or intended professional activity within solving practical, consulting, research, training, diagnostic challenges is the leading process of play model technology.

The model play form determines specificity of solving management challenges. Gamification stimulates paying attention to the transformation of the original sample criteria of play activities into general settled transformations (Anisimov, 2009, 74).

New knowledge and innovative awareness occur early at the beginning of the game experience mainly spontaneous and intuitive. Play model technology increases the likelihood of their reflexive awareness and fasten the accumulation process. Reflexive processes and mechanisms implement not only

normative and critical but also a research function. Therefore, play model provokes not only changes and development acceleration of players (in the role of "actors") but spectators as well.

The constant maintenance of a state of high problematic character of the participants in a game-model event reveals reasons, consequences and results of their own actions and decisions that they make "here and now", in the semantic space of the model, that are not obvious to them. During the model process university teachers have got an opportunity to check whether their solution works. There is not simply the study of the collective stereotypes activities but also the process of personal experience acquiring. There is a continuous communication between the participants during the play model technology with collective activity as a subject. There is a simulation of options and scenarios for the development of the management system and the system of collective activities.

During the play model technology the participants work by their own reproducing those collective communication patterns of thinking, logic and communication management that are familiar and understandable to them. Their communication activities are standardized by play model rules in order to be close to the topic and to understand each other. Under the influence of play regulations there is a gradual change in players' collective thinking stereotypes and the number of ways of communication and there is a significant increase in number of collective activity management (where communication is a type of collective activity).

Communication and activities are related to each other through their ability to meaningful communication and the ability to use it. Such quality of communication as meaningfulness presupposes that players of a play model event have a developed ability to reflect.

According to G.P. Shchedrovicky during a play model technology the process of co-organization takes place (the conversion of individual activities into the collective activity) (Shchedrovicky, 1995, 116).

Originally, co-organization occurs in groups and afterwards groups act as single collective subjects in relation to the whole play model event. Group co-organization occurs as a result of cyclic experience by its members of four collective states: situation analysis, goal formulation, selection of action mode and the implementation of the action. At the end of play, model event there usually occurs co-organization of all its members. They are transformed into a collective entity.

At the moment when the members of a play model event start understanding each other's professional logic, motivational meaningful priorities, goals, interests and intentions of each other individual activities transform into collective ones. Due to this fact, communication within the team members of a play changes qualitatively and transforms into communion of understand each other people. Groups and individual subjects find their places in the model system of future activities, coordinating with other groups mutual forms and methods of cooperation.

During the period from January 2017 to January 2019 at the Pedagogical Faculty of Baranovich State University there were organized three play model events under the guidance of professor of Occupational Psychology of Professional Activity of the Russian Presidential Academy of National Economy and Public Administration O.S. Anisimov. Play model events were implemented in the aspect of studying the problem of creating the University consulting service. Participants of the event were in both role positions of a "customer" and a "consultant".

During the implementation of the above-mentioned play model event the participants were acknowledged with the technology of a play model anticipation in methodological framework of thought (Anisimov, 2009, 257).

The work on the research problems in the frame of the play model event was organized in two basic forms: plenary and group work. At the end of the first plenary session (installation), the participants (84 persons) were divided into groups, which were prepared by the consultants in advance. Each group worked with a separate consultant. The groups work was held in open discussion, but it was not possible to change the topic and all judgments were fixed with a help of schemes.

Results and Discussion

Not all participants' thought processes were performed according to the scheme, but only those of essential significance for our issues. We established the fact that at that stage of play model a pre-correction of understanding of the thought subject took place (87 % of the participants in play model events).

The results of those play model events verified the fact that they can include any content taken from life or professional experience. It is essential that the basis of its organization is the combination of action, reflection, awareness of how to work and self-determination in the situation on stage. Play model event structure can be represented by the following components:

- play orientation corresponding to innovation targets which is implemented into the professional activity;
- play activity is a solution to a specific problem, formulation and a solution of a problem (which is incurred during implementation of innovation), the demonstration of professional activities;
- play communication is in a group or intergroup discussion;
- play reflection is in a group, intergroup, play technological and organizational.

Organizing and carrying out of game model of several empirical events in accordance with the above-mentioned cycle gives the participants some skills in common procedures implementation. Due to the survey, we have identified the following main changes in the participants caused by the participation of faculty members in play model events:

- acquaintance with the procedure of sample forecasting by converting specific cases forecasting of their practice (96 % of participants);
- getting comparison skills (identification) of scenario with thought subject of a participant (72 % of participants);
- getting ability in scenario directing (88 % of the participants);
- getting critical skills in separation of a scanned sample scenario from the thought subject (72 %).

The need for experimental modelling appears with a necessity in checking of the theoretically existing schema of professional activity educator changes into an actual algorithm for its activities. In the experimental simulation the theoretical scheme becomes the thought subject. The predicates are chosen from the participants' experiences in a play model event. It is not necessary to analyse the entire case study but only the individual elements that are synthesized before the final substantive content of the formal scheme.

The scheme which is described as a text on an empirical material with a specific subject may be considered as a scenario with an abstract theoretical concept as a basis (the productiveness ensuring of introduced innovation scheme). The embodied into reality scenario is a valid experimental model. The established on the above principles model was exposed to procedural reconstruction and its result was compared with the original theoretical scheme. If there is a discrepancy after the comparison there was evaluated and changed either the script, direction or the original scheme in the case of problematic character of its real model material. After making adjustments to the entire theoretical framework the described above cycle was repeated. The experimental simulation was considered completed only when it entirely corresponded with the theoretical and procedural reconstruction scheme and the correlation (scheme) is considered to be experimentally verified actual algorithm of the teacher's modified innovation activity.

In the process of collective discussion and the even evaluation (reflection) we were able to accommodate different opinions and views. Thus, the group of participants develop a common "language", forms a single conceptual space in which understanding is achieved. After that it is possible to neutralize interpersonal, intra-and inter-group conflicts and overcome the resistance to change in the basis of which as we discovered there is a lack of information and differences in interpretations (88 % of participants). In the participants' team of the play model event there develops a real cooperation (according to 96 % of participants).

Among the most important results of the play model study which were discussed at the meetings of the Methodological Commission and the Council of the Pedagogical faculty of Baranovichi State University, at international conferences (Belarus, Bulgaria, Lithuania, Poland, Russia, Slovakia, Ukraine) it is necessary to note the following:

- the misbalance removal between the available and relevant information (96 % of play model participants);

- starting up of converting information into knowledge mechanisms (88 %);
- formation group knowledge and experience sharing channels ("vertical" and "horizontal") (96 % of participates);
- participants' competencies acquiring in complex, systemic problems solving in the teaching practice realities (87 % of respondents);
- getting acquaintance with the analysed problems from different points of view introduces in their solving knowledge and experience. As a result, there is a new understanding of the situation, there are new details and new approaches of the problem solution appear (88 % of participants).

The play model promotes self-definition abilities and overall creativity of the event participants through the specification in the potential of a particular type of activity. Play interaction creates optimal conditions and prerequisites for innovation and creativity and self-development. The requirements mobility of the play behaviour requires a subjective self-organization and mobilization. It is prerequisite the teacher's new solutions and higher results through motivational self-definition process.

Due to the game model and improvement of the game mechanism, the subject combines individual needs and the terms of social and cultural innovation adequacy. After coming through the whole play model event, the subject feels responsible for social relationships constructing and models of introduced innovation improving the quality of the educational process.

In play model technology the model types of executive activities are performed and carried out in problem situations. Their content forces the performer to decline the usual method of executive function implementation. The meaningfulness mobility in play model technology (scenarios and plots) is a favourable foundation and condition for intensification of participants' development.

In terms of play model technology, the students are provided with the opportunities for creative self-expression, self-development, achieving innovative goals. The organization of these processes which are determined by the rules of the play prospects directedness reflection of its participants to self-certainty, self-correction, as a condition of the most effective self-organization.

Conclusions

Play model for university teacher is a means of innovative projects developing with a fundamentally new product such as programs and projects of innovative professional educator, corresponding to the long-term requirements of the surrounding society. Play model research as a form of exercise can become a supporting a person in crisis facility.

Play model world is seen as a qualitatively new, progressive form of learning characterized by a high degree of accessibility and flexibility, focused on the participant. Availability means the absence of requirements for the educational level at the initial stage of play model interaction, flexibility – plasticity and variability of all components of the educational process: the structure and content of educational programs, training and methodological support, forms of organization of training sessions, as well as place, time and pace of learning. The member of a play model event has considerable discretion when determining the objectives and the organization of the study, the individual needs and inclinations respectively.

Gamification as a part of consulting implemented as a pedagogical technology of the support of the process of university teachers' continuous education by the consultants of the same educational institution, is a productive means of improving their skills.

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