MOTION OF VARIATIVENESS OF THE THEMATIC CURRICULA AND SYLLABUS FOR THE PROFESSIONAL DEVELOPMENT COURSES OF THE PEDAGOGIC PERSONNEL IN THE PUBLIC EDUCATION SYSTEM

Askarov Abror Davlatmirzayevich
Scientific Researcher/Uzbekistan
Scientific Research Institute on the
Science of Pedagogy named after T.N.
Qori Niyoziy, **UZBEKISTAN**

ABSTRACT

Curricula and syllabi designed taking into consideration target bodies demand and they should apt to the state legislation. And of course, it is also a part of the main document for implementing activities in an appropriate field. Well-designed curricula and syllabi in the field of teachers Professional Development system are a major factor in the improvement of the Professional Development courses and serve for providing the quality of education. As we know there are different types of Professional Development courses for teachers and educators, but we mostly talk about to types: traditional (face to face) and Distance (Independent) Professional Development of Education Personnel. In this article I am going to share my findings and ideas the importance of varietiveness of the thematic curricula and syllabi for the Professional Development courses of the pedagogic personnel who works in the field of Public Education system. I use my analysis done in the sphere of Distance Professional development course.

Keywords: Distance Professional Development of Teachers, course content, varieties, customers, curricula, syllabi.

INTRODUCTION

Today the Globalized period set a variety of requirements for the teachers, such as it is required to renew their professional knowledge constantly, strengthening their professional competency and skills. For this purpose, establishing Professional Development system served for providing the highest quality and focusing on its sustainable development and easily apt to the requirements of the contemporary time as well as supporting teachers for developing their professional skills competitively is strictly specified in the National Program of Personnel Training of the Republic of Uzbekistan [1]. In-Service and Retraining deals with professional development, strengthening and renovating the personnel's professional knowledge and skills in all spheres of uninterrupted education.

LITERATURE REVIEW

Nowadays, despite of the achievements on elaborating organizational-pedagogic stages of Professional Development of the teachers and successful actions conducted on developing scientific-methodological provision and scientific research in this field, there is still existed a variety of pedagogic issues, which are waiting solution. For example, to identify course content for professional development system of secondary school teachers according to their needs, developing changeable, vary thematic program and syllabus basing on the curriculum considered as one of the actual problems in the sphere of Education.

In the scope of our research carried out on implementation of Distance Learning Professional Development of Pedagogic Personnel fulfilled the approaches concerning to the solution of above-mentioned issues.

To identify the Professional Development Course Content basing on the Needs of analysis

The demand of course content, which is actual in the process of Professional Development is becoming lower or it has already acquired, in contrast some topics that have been missed before and now they need renewing or inserting new topics have been existed all the time. That is why in the basic requirements of the Professional Development Course syllabus content included the requirements "directed to formulate and develop new, additional professional comprehension and skills" [2]. This requirement appeared depending on the following factors:
- Widening the state policy and reforms directions in the field of education and Professional development;
- Raising the Professional Skills requirements for professions and occupations;
- Constant modernization of State Requirements (Education Standards) on the types and stages of Education;
- Appearing and application new effective methods and technologies due to the development of Information Communication technologies as well as the results of scientific researches.

But the content of the Professional Development courses are not renewed targeting to the enough analysis, deep theoretical and practical basis every time. One of the main reasons are the following:
- the suggestions concerned to the content of the course not to be formulated on time by the main customer (institution, teacher, Regional Education Departments) on the one hand;
- on the other hand the absence of effective action(motion) on learning the components of the content, selecting the suggestions and elaborating the course content.

Reviewing the component of existing course content, selecting the suggestions and renewing Professional Development course content accomplished by the special task group consists of experienced specialists, professor-teachers and practitioner experts of the institution where organized and delivered, conducted Professional development courses.

Task Group (a) select the suggestions given on the professional Development course content, (b) study the components of the existing course content.

The suggestions given about the Professional Development course content can be selected according to the subject form as following:
- suggestions(ideas) of the main customers;
- inner suggestions;
- suggestions of different organizations and communities.

The suggestions about the course content of *the main customers* show the professional needs of the teachers. The *inner suggestions* of the Teacher Training Institutes formulated basing on the investigations, observations of the professor-teachers of the Educational Institution as well as the results of Questionnaires and monitoring (tests). The suggestions of the *other organizations* reflected by written form in an appropriate order. These suggestions and recommendations indicate the social needs of Education. These suggestions and

recommendations provide the objectivity (being closer, understanding, feeling, connections between theory and practice) of the Professional Development course content.

Besides the given suggestions and recommendations, analyzed existing course curriculum, syllabus and learning materials and some old or acquired materials, the topics which are not changed during the 3 years period and materials caused to use repeatedly or the topics can be integrated into other topics are defined and removed from the course content. In this way the content of the Professional Development courses completed, renewed basing on the analysis, developed syllabus appropriately to the existing State Requirements.

METHODOLOGY

Details about methodology should be given in this section. Font Size 12, Times New Roman, single spaced. All the subheadings in this section should be in font size 12 Bold, Times New Roman, single spaced. The first letter of each word in subheading should be capital.

Working out varieties' of learning Themes curricula and syllabus

Consisting of maximal education needs, the renewed content itself has general specifics. It is necessary to separate the teaching part due to the allocated hours between the modules and blocs given in the approved curricula.

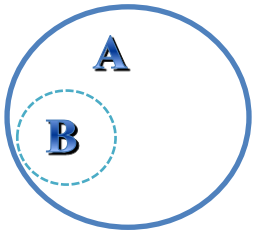

Figure 1

Typically, drawing special attention to the development of the learning themes curricula and syllabus basing on the results of the vary types of questionnaires and observations, from the renewed set of curricula and syllabus (A) separated (B) that is considered the most important and actual ones ($B \subset A$) and basing on this set organized courses. Such kind of approach, which is disregarded attention to the part not included in B set from A set causes to completely uncovering the needs of education.

As a result the following situations may appear:
- The knowledge included in the chosen set (B) to be formulated by the learner before;
- Already acquired skills in their professional career on solving problems related with some themes included in the chosen set;
- The learner is interested in the themes (topics) more and consider necessary which are not included in the course set.

The negative effects such kind of situation to the achievement of target goal of Professional Development seen in the following:
- The intrusive motive regarding to the content of the activity of learner become lower;
- Destruction the logics of the learning and teaching process that is, wasting time, force and money:
- Retardation in the system of Professional Development.

It is clearly seen, that existing motion don't completely demonstrate its flexible features. In one word, it is thoughtful to apply differentiated approach to choose Education programs paying attention to the variability of the topics and syllabus of the course presented to the learner.

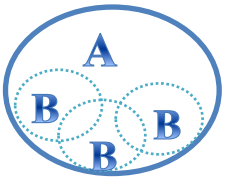

Figure 2

If we consider the number of topics belonged to A set learning modules as "*n*" implement the cycle separating "*m*" (amount of topics separated from the defined ones beforehand) from the given elements, will be formed a set as below

$A_n^m = \frac{n!}{m!(n-m)!}$, $(0 \le m \le n)$ that each one differs from others at least one element. [3,6]

Such kind of number amount growth of variations cause to face diverse complications on grouping learners appropriately, coordinating of organization and management of the learning process, monitoring the quality of professional development courses whilst creating an environment completely scope the needs.

At the point, there is appeared the main problem: How can the curriculum and syllabus for the professional development courses design basing on the renewed content of the professional development courses?

RESULTS

The result of our research showed that the teachers, main clients, who involved to the Professional Development courses based on the renewed course curricula and syllabus can achieve feasible, effective solution through (a) studying the attitude of the organizations and community that have given their suggestion as well as by (b) doing the variety of activities)

At first, the individual attitude to the renewed curricula and syllabus defined as a form of survey (it is purposeful to conduce survey basing on the web-technology).

The survey carries out basing on specialization and learning course categories (Social subjects, General subjects, subjects on specialization, hours belonged to the institution for allocation additional or actual topics) as well as course modules (for example, Problems of Economics, Information Communication technology, theory of the subject, methods of teaching and so on). Each participant who takes part in the survey expresses his/her attitude (ideas) about the themes by ticking one of the following elements: e_1-eager to (necessary), e_2-partialy know (some parts are necessary), e_3- know (I'm already aware of). These elements called elements of attitude.

Because of the survey made a set consisted of the elements of attitude. Due to the expressing attitude, targeting to their own needs under this set the number of variations may be as $A_{e\ recur.}^{n} = e^n$ according to the rule of repeatedly replacement. (Table 1). Here, n- number of themes included in the survey, e- number of the attitude types-they are 3 (e_1, e_2, e_3)

Table 1

participants	Theme 1	Theme 2	Theme 3	...	n- theme	Variant
Participant-1	e_1	e_1	e_1	...	e_1	1
Participant-2	e_1	e_1	e_2	...	e_2	2
...	...	...	...	...	e_2	…
Participant-u	e_1	e_1	e_1	...	e_3	$A_{E\ recur.}^{n}$

The issue defining the most optimal variants apt to the set of formed elements of attitude solve through conceptual modeling. The requirements of this conceptual modeling indicated as following:
- minimizing the number of variants;
- maximal achievement of providing needs.

DISCUSSION

As we define the number of themes (it's indicated with the letter "m") which are going to choose for 1 variant according to the allocated hours in the curriculum. For this, a number of activities and rules use directly in the solution of the issue:

Step 1. The most optimal variants straightly depend on the participants' e_1- eager (need) elements of attitude that is the "eagers" of participants considered their needs and served as the basis of indicating the optimal variants. That is why, among the whole attitude of the participants ($\{a_{ji}\}$, $i = \overline{1,u}$, $j = \overline{1,n}$) to the theme –*j*, should choose ticked e_1 elements of attitude ($a_{ji} = e_1$) and then defined the amount of attitudes which are appropriate to this elements from the other themes. For this including the ration $l_i^k(e_1)$ appropriateness to the theme

$$l_i^k(e_1) = \begin{cases} 1, a_{ji} = a_{ki} = e_1 \\ 0, otherwise \end{cases}, k = \overline{1,n}$$

and calculate the number of implemented elements basing on all elements as following:

$$S_j^k(e_1) = \sum_{i=1}^{u} l_i^k\,(e_1)$$

By comparing calculated total amount results to each other, choose first "*m*" amount placing them in decreasing order and then fixed their index number (number of the theme). This set of fixed themes "*j*" called theme targeted Variant (V_j).

In the process of choosing "*m*" from the themes placed in decreasing order $S_j^k(e_1)$, if the total amount of elements are equal they will be chosen basing on the $S_j^k(e_3)$ smallest quantum:

$$S_j^k(e_3) = \sum_{i=1}^{u} l_i^k\ (e_3)$$

here $l_i^k(e_3) = \begin{cases} 1, a_{ji} = e_1 and\ a_{ki} = e_3 \\ 0, otherwise \end{cases}\ k = \overline{1,n}$

If the smallest quantum of the $S_j^k(e_3)$ are equal, they will choose according to $S_j^k(e_2)$ the largest quantum:

$$S_j^k(e_2) = \sum_{i=1}^{u} l_i^k\ (e_2)$$

here $l_i^k(e_2) = \begin{cases} 1, a_{ji} = e_1\ and\ a_{ki} = e_2 \\ 0, otherwise \end{cases},\ k = \overline{1,n}$

Besides, if there is existed any theme accepted "zero" $S_j^k(e_1)$ quantum and their distinction amount of the module on any of the theme is minor from "*m*", considered there isn't any theme targeted on this variant.

It is clear, that the number of chosen variants are not more "*n*", that is it can be equal to the number of themes.

Step 2. In this step, the process of integrity basing on the theme will formulate. That is the number of theme-targeted variants will reduce.

Comparing "*j*"-theme-targeted V_j variant's elements with other targeted variant elements separated completely repeated elements in V_j (that is $V_t \cap V_j$) or amount of variants at least 4/5 parts have repeated from the total amount the elements of variants ($\frac{n(V_t \cap V_j)}{m} \geq 4/5$). In the conditions of accomplishing the requirements on $\frac{n(V_t \cap V_j)}{m} \geq 4/5$, it is necessary to look through the elements of V_t varinats the indicators repeated in other targeted variants. Because there will be $\frac{n(V_t \cap V_k)}{m} \geq \frac{n(V_t \cap V_j)}{m} \geq 4/5$ in any other V_k variant. And, it shows that it is purposeful to integrate V_t into V_k based variant.

In the process of integration besides above mentioned requirements, the situation related with the learners' e_3- know (I'm already aware of) attitude should also take into consideration. For this, at first the "*x*" elements of V_j, which is not existed among V_t variant (themes) separated on $S_t^x(e_1)$ and $S_t^x(e_3)$

If for all the "*x*" elements the quantum of the $S_t^x(e_3)$ and $S_t^x(e_1)$ will be smaller than 1/3,

$$\frac{S_t^x(e_3)}{S_t^x(e_1)} \leq \frac{1}{3}$$

there is not rejected element of V_j in V_t. It is accepted in this way (in the entire situation and these variants integrated into V_j. Otherwise V_t variant will find unintegrated into V_j.

Above given tasks will look check for other variants basing on V_j variant and separated a set of variants appropriate to V_j variant. V_j variant considered – optimal variant for such kind of variants.

$O = V_j$

The activities specified for the 2nd step will do onto all other variants, except V_j and other integrated variants into it and continued identification of optimal variants.

So, O_r optimal variants to be defined and the task minimizing the number of conceptual modeling variants to be done. Here, *r* - is the number of optimal variants (*r=[I..R]*, *R*-is an amount of optimal variants).

Now we will check the reality of optimal variants, that is the level of facility needs of participants. At first detached optimal variants for providing the needs of each participant as much as possible for this the amount of appropriate amount of attitudes to the elements of optimal variants through comparing elements of optimal variants with the attitudes of participants and formulate the following sets for each participant:

$$S_i^{O_r}(e_1) = \sum_{j=1}^{n} l_j^k\,(e_1)$$

here $l_j^k(e_1) = \begin{cases} 1, a_{ji} = b_{kO_r} = e_1 \\ 0, otherwise \end{cases}$ $k = \overline{1,m}$

$$S_i^{O_r}(e_2) = \sum_{j=1}^{n} l_j^k\,(e_2)$$

here $l_j^k(e_2) = \begin{cases} 1, a_{ji} = b_{kO_r} = e_2 \\ 0, otherwise \end{cases}$ $k = \overline{1,m}$

$$S_i^{O_r}(e_3) = \sum_{j=1}^{n} l_j^k\,(e_3)$$

here $l_j^k(e_3) = \begin{cases} 1, a_{ji} = b_{kO_r} = e_3 \\ 0, otherwise \end{cases}$ $k = \overline{1,m}$, b_{kO_r}- *k*-element of O_r optimal variant .

Now for the largest *p*-element ($c_{pi}(e_1)$=SUP$\{S_i^{O_r}(e_1)\}$, *p=[1..R]*) of $S_i^{O_r}(e_1)$ set to be examined the following tasks:

Task 1.

$$\frac{c_{pi}(e_1)}{m} \geq \frac{1}{3}$$

Task 2.

$c_{pi}(e_1) \geq c_{pi}(e_3)$

here the *p*-element of $c_{pi}(e_3)$ - $S_i^{O_r}(e_3)$

If the both tasks have done optimal variant O_p considered the appropriate variant to the needs of *i*-participant. The satisfaction indicator of the optimal variant for this participant consists of

$\frac{c_{pi}(e_1)}{m} \cdot 100$, $\frac{c_{pi}(e_2)}{m} \cdot 100$, $\frac{c_{pi}(e_3)}{m} \cdot 100$,

that is, it measures by 3 ratio at the same time.

If the number of the largest elements, which are done on both tasks are more than one (for example, $c_{pi}(e_1) = c_{fi}(e_1)$, *f*=[*1..R*]), in this state appropriately to the largest one of $c_{pi}(e_2)$ and $c_{fi}(e_2)$, if it is defined the equality of these elements, according to the smallest ratio of the $c_{pi}(e_3)$ and $c_{fi}(e_3)$ to be identified optimal variant for "*i*"-participant.

The reason of not accomplishing of above-mentioned tasks two situation may be impact: 1) the survey filled in wrong, that is, the attitudes done unthoughtful; 2) the theme included in the survey definitely unsatisfied for the participant (mostly, that mostly the participant has chosen the attitude e_2 or e_3. In such situation recommended to study the attitude of the participant individually, in necessity the components of the optimal variants should be revised basing on the attitude of this participants ideas.

CONCLUSIONS

In conclusion, it is true to say that the effectiveness of the motion on identifying optimal variants depends on implementing the following organizational issues appropriately and it leads to close interactive relation of the participants attitudes:

- The trustfulness of the posted themes for giving ideas (attitude);
- Correct indication the number of elements of variants and the content of the theme;
- Conducting survey honestly and correctly;
- Analyzing, discussing and applying defined optimal variants.

With the help of such conceptual model of variation curricula and syllabus of the Professional Development courses developed the product implemented the process automatically. As a result, despite the number of participants who expressed their attitude in the survey created the opportunity to form optimal variants, which are not more than the number of the theme (minimal). When the program is applying one can get the important information as:

- optimal variants indicated the topics of Professional Development;
- topics, which are not included in the components of the optimal variants;
- variants appropriate to each participants attitude;
- the number of participants whose attitude maximal suitable for each variant;
- the level of appropriateness of the variants to the attitude;
- the satisfaction indicators of the variants basing on the indicating one variant for one participant;
- general appropriateness of the variants to the participants attitude;
- the number of participants who are not satisfied with the variants and their attitude.

It is practically confirmed, that practical syllabus in 2015 program analyses results of questionnaires on the Professional Development Courses connections with expert summaries

REFERENCES

1. National Program of Personnel Training of the Republic of Uzbekistan (2013). *A set of Legal documents of Uzbekistan,* Volume 41, Article 543.
2. Resolution № 234 “Measures on strengthening Retraining and Professional development system of Public Education staff” (2014), August 15. *A set of Legal documents of Uzbekistan,* Volume № 34, Article № 433.
3. Rasulov A.S. and others, (2006) Theory of eventuality and Mathematic statistics: Textbook. p. 272,*“O`zbekiston faylasuflari milliy jamiyati”* Publishers, Tashkent.