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## Professional Socialization of Young People in the Media: Cognitive Modelling

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### Abstract

The problems of professional socialization of young people and students become ever more topical now. Under the influence of the Internet and media, a youth request is formed to change educational and vocational guidance processes. Changes in professional socialization processes occur both at the level of socialization agents and at the level of socializing persons. The society strongly manifests the need to search and form modern models that provide predictable and orderly interaction within professional socialization. The theoretical-methodological basis of this article is a topological description based on graph theory, which allows determining the relationship between components of the model of professional socialization of youth at the level of concepts (constants). As a method of formalizing the structure, a cognitive model is used, defined in graph theory as a sign digraph. Analytical studies are based on a teaching model based on a double feedback loop. The essence of professional socialization is revealed at the intersection of processes such as adaptation and internalization, at implementation of basic education, professional education and social self-realization processes. The cognitive model is presented as a complex image, including a mental model and an adaptation model. Factor impact integration gives rise to a complex reaction of the professional socialization factor as a node of intersection of simple loops. The cognitive model is a structure for integrating causes and decomposing effects. It allows forming a unified and holistic view of the studied problem of professional socialization of young people and provides the targeted separation of significant knowledge about the situation of professional orientation in the media.

**Keywords:** professional socialization, media education, youth, cognitive modelling, adaptation, internalization.

### 1. Introduction

The problems of professional socialization of young people and students become ever more topical now. Orientation to traditional models, based only on the knowledge of the profession, is clearly not enough for the professional self-determination of young people. At the same time, overcoming traditional models of professional socialization is accompanied by a disordered “scattering” of socialization trajectories of young people under polarization of the society (Kovaleva, 2012). The society strongly manifests the need to search and form modern models that provide predictable and orderly interaction within professional socialization. The processes of this interaction, defined as secondary professional socialization (Berger, Luckmann, 1966), are multi-faceted phenomenon that determines procedures for a person entering the world of a new

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profession, adapting to social and professional environment, integrating with it and subsequent creative internalization (Tarasenko et al., 2016). It is internalization that allows incorporating social norms and values into the inner world of a person, as a result of which social rules become internal for a person to the intent that they are no longer imposed through external regulations, but as if imposed by the person himself/herself, becoming a part of his/her “I”. Needless to say that the search for models that are attractive in modern social situations is specified among the most important problems of science and education. Against this background, attempts to increase the efficiency of professionalization processes by incorporating specialized “agents” of socialization in the implemented models are of interest. For example, in (Danilova, 2008) it is suggested to attract the mobilization component of the Internet socialization, in (Nor-Arevian et al., 2017) the emphasis is on game visual models, and in (Genner, Süss, 2017) the media is designated as a key factor of socialization.

Therefore, the objective of our study is development of already tested “agents” of socialization and formation of models of professional socialization of youth in the media on their basis.

## 2. Materials and methods

The theoretical-methodological basis of this article is a topological description based on graph theory, which allows determining the relationship between components of the model of professional socialization of youth at the level of concepts (constants). In this study, a cognitive model is used as such formalization tools, defined in graph theory as a signed digraph (Roberts, 1986). In principle, the cognitive model allows relying in the research process on each person’s repertoire of mental models to analyse the observed situation. Similar to the method of perception by samples (stereotypes) noted by M. McLuhan (McLuhan, 2005). Such a model serves as a means for the formation of a unified and holistic view of the problem under study and provides the targeted separation of significant knowledge about the situation. As a result, the analyst receives an initial conceptual model that defines the problematic aspects of the observed situation. Its advantage lies in the fact that it presents the picture as a whole, without losing details, and, at the same time, avoids the cumbersome integration-decomposition procedures and allows the analyst to focus on a holistic situation. We should note a significant simplification of the model verification procedures, because significant factors of the studied conflict situation are integral elements of a holistic target system, the reliability of which has already been determined at the level of serotypes (Gurba et al., 2018).

Such an approach to the use of cognitive models for analysing the problem of professional socialization of young people in the media can be interpreted in the context of the theory of media education as the development of “critical thinking” (Masterman, 2000) or a cultural dialogue based on comprehension, analysis and evaluation of the media text (Fedorov, 2015).

## 3. Discussion

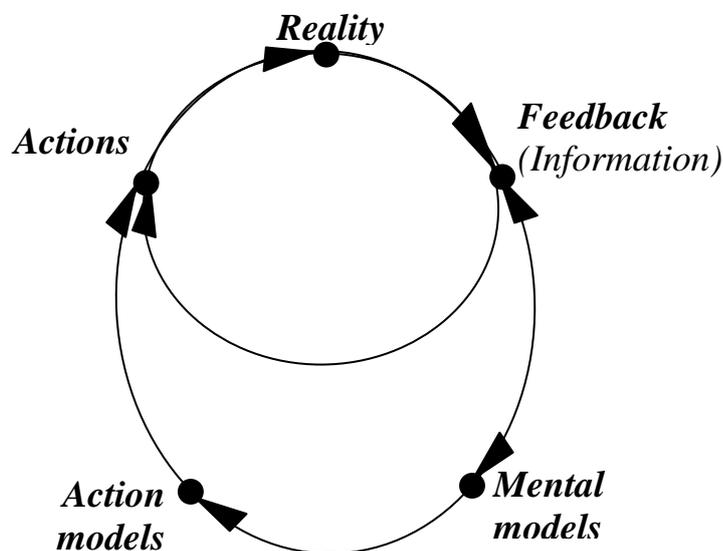
The promotion of the media as an “agent” of professional socialization is associated with its ever-increasing accessibility to young people. Early at the beginning of the twenty first century, M. Prensky (Prensky, 2001) defined modern young people and students as “digital natives” and “digital immigrants”. A new type of social individual is being constructed – Homo virtuaahs – a person focused on virtuality, on the media (Danilova, 2008). It is currently noted that the media are a key factor in socialization among other main agents of socialization. The data obtained indicate that the repeated exposure to the media has a potential for learning (cognitive, social or cultural skills) and long-term consequences for behaviour and cultivation of the worldview and values (Genner, Süss, 2017). While the main focus is on various aspects of media literacy, for example, organization of personal and professional communication, scalability of media spaces (Hobbs, 2015), study of media socialization based on information about media ecology (Milenkova, 2018), etc.

It should be noted that, in this case, the basic model for promoting the media as an “agent” of professional socialization of young people remains an improved teaching model based on a double feedback loop (Argyris, Schon, 1996), given in the form of a cognitive map in Figure 1.

In the model, the presence of feedback is crucial for the education process, which makes it possible to start a cycle of continuous learning.

The main loop actually implements a cycle of continuous learning based on perception, comprehension and action (Kolb, 1984). But the second loop embeds internalization models in the

education process. Information about the real world not only affects actions - cognitive procedures, but also is capable of changing *mental models* of the subjects of education. Self-adjustment of *mental models* results in a change in *action models*, and then sets actions, i.e. adjusts the education process. The variability of *mental models* is a key to the effectiveness of adjustment to a specific reality in the education process, which is especially important when organizing vocational education systems.

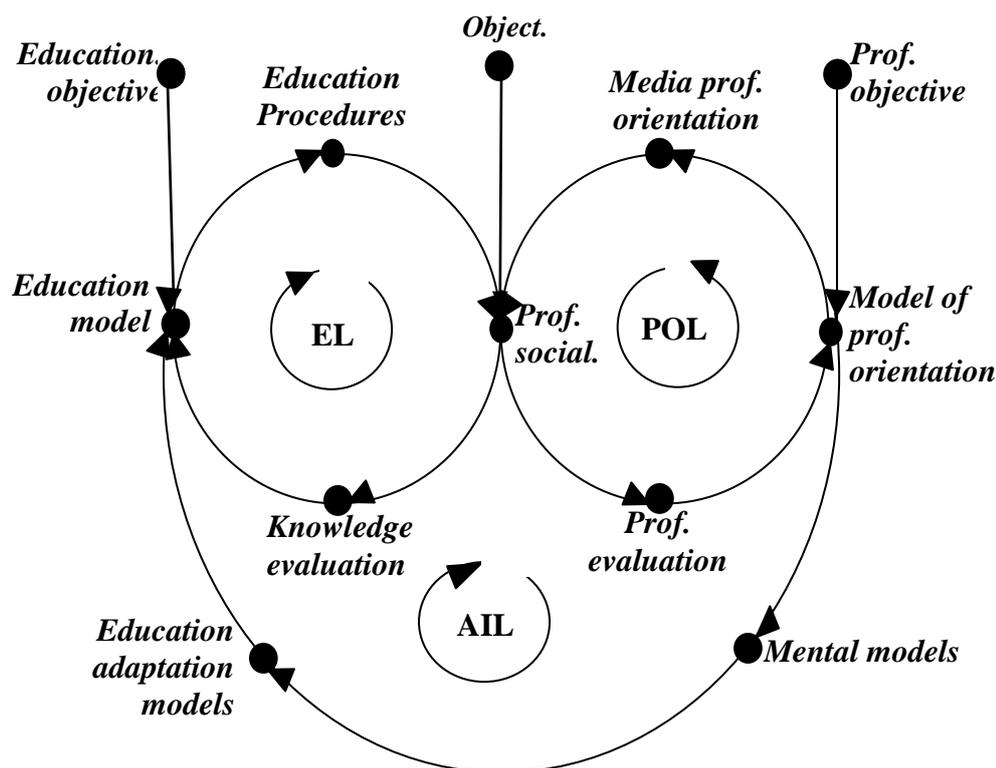


**Fig. 1.** Double feedback loop learning model (Argyris, Schon, 1996)

Casualness of *mental models*, i.e. their cause-and-effect orientation, stimulates a self-change in the loop in a given initial direction. Examples of the formation of this self-change can be observed in the process of self-regulated learning, in which the procedures of cognition, motivation and behaviour are built in accordance with the goals, results of analysis and regulation, and contextual characteristics of the educational environment (De Stasio, 2015). As applied to the media education system, in (Tarasenko et al., 2018) it is shown that one of the effective models is a structure of positive feedback loops based on growth accelerators, for example, interaction accelerators using accompanying (complementary) media texts that enhance the student's communicative or creative abilities.

#### 4. Results

The use of the cognitive model of educational cycles based on the double loop of positive feedback in the context of analysis of the problem of professional socialization of young people suggests its complementation and development in accordance with the essential meaning of socialization. The latter is revealed at the intersection of processes such as adaptation and internalization (Kovaleva, 2012), at implementation of basic education, professional education and social self-realization processes (Tarasenko et al., 2016). Based on these attitudes, when constructing a cognitive model of professional socialization of young people, it is necessary to rely on the existing theoretical groundwork for the structural analysis of adaptive systems and the practical experience of cognitive modelling of systems with integration of human mental models in the adaptation loop, including learning models based on a double feedback loop (Serdyuchenko, 2018). The parallel processes of adaptation and internalization reflect the predominantly object nature of interaction of a person and the surrounding community. Social self-realization, however, is already a subjective manifestation of a person, deployment of its essential forces in accordance with the assigned social qualities, and translating their potential into a conscious, goal-directed action (Kovaleva, 2012). The cognitive model reflecting the indicated integrative interaction of the processes of professional socialization of young people is shown in Figure 2.



**Fig. 2.** Cognitive model of professional socialization of young people in the media

The processes in the model are generated by three objectives, namely, *Educational objective*, *Professional objective* and, particularly, *Objective* of professional socialization. The concept of *Professional socialization* belongs simultaneously to two loops: the loop of “cyclically continuous education” (EL) and the loop of “professional orientation in the media” (POL). So, already at the initial stage, the situation under study is presented in the form of a more complex image based on a composite “mental model”. Factor impact integration gives rise to a complex reaction of the professional socialization factor as a node of intersection of simple loops (Serdyuchenko, 2018). Each simple loop is a ring model with positive feedback and includes a causal chain with a common problem factor - *Professional socialization*. The image ceases to be simple. The double-loop cognitive model is a model of the integration of causes and decomposition of effects.

The basic cycle of EL media training is formed by four factors: *Education model*, *Education procedures*, *Professional socialization*, and *Knowledge evaluation*. A change in the value of any factor (increasing or attenuation) will be supported (increased or attenuated) in the positive feedback loop. This is the structure of the active cyclically initiated educational cycle. Thus, an increase in the volume of the *Educational objective* in the format of the *Education model* will entail the build-up of *Education procedures*, i.e. an increase in professional knowledge, which will cause the growth of *Professional socialization* and, accordingly, initiate a high result of *Knowledge evaluation*. Finally, the growth of the latter further stimulates a self-change in the initial direction of the *Education model* factor, i.e. the next educational cycle. The same refers in the POL loop to factors: *Model of prof. orientation*, *Media prof. orientation*, *Professional socialization*, *Professional evaluation*. In it, the launch of a cyclic project, for example, through the growth of the *Professional objective* in the format of the *Model of prof. orientation*, calls for the implementation of procedures of *Media prof. orientation* and increasing of *Professional socialization*. The next factor of *Professional evaluation* on the causal chain again stimulates the further self-change in the initial direction of the factor of *Model of prof. orientation*, i.e. the next cycle of vocational guidance in the media.

However, the most important aspect of professional socialization remains outside the scope, namely, “integration of a person in the sphere of professional activity, consisting of the process of acquisition and reproduction of professional knowledge, norms, values, attitudes, behaviour patterns during the formation of a person as a member of a certain professional community and

aimed at ensuring his/her effective functioning as a professional” (Tarasenko et al., 2016). And this, in fact, is the *Objective* of professional socialization, which should initiate the processes of adaptation and internalization (Kovaleva, 2012). This is where the additional *Adaptation and internalization loop* (AIL) comes from. It includes the concepts of *Mental models* and *Education adaptation models*. In addition to these concepts, the loop shows the *Education model*, *Education procedures*, *Professional socialization* and, further, *Professional evaluation*, *Model of prof. orientation*. All in all 7 factors (only the factor of *Media prof. orientation* is removed from the loop). The loop covers all processes and all intersections. Therefore, it is precisely in it that the global goal of professional socialization is invoked and realized as a decisive phase of socialization, when “formation of a generalized other takes place in consciousness along with establishing the objective reality, and at the same time, the subjective establishing of a holistic identity (Berger, Luckmann, 1966). Thus, a sense of the need for conformity with social and professional norms is developed in the processes of adaptation and internalization of the subject in accordance with the mental model of a particular person formed by the previous experience.

## 5. Conclusion

1. The problems of professional socialization of young people and students become ever more topical now. Under the influence of the Internet and media, a youth request is formed to change educational and vocational guidance processes. Changes in professional socialization processes occur both at the level of socialization agents and at the level of socializing persons. The society strongly manifests the need to search and form modern models that provide predictable and orderly interaction within professional socialization.

2. The basic cognitive model for promoting the media as an “agent” of professional socialization of young people remains an improved teaching model based on a double feedback loop. In it, information about the real world not only affects actions - cognitive procedures, but also is capable of changing and self-adjusting mental models of subjects of education. The variability of mental models is a key to the effectiveness of adjustment to a specific reality in the education process, which is especially important when organizing vocational education systems. Casualness of mental models, i.e. their cause-and-effect orientation, stimulates a self-change in the loop in a given target direction.

3. The essence of professional socialization is revealed at the intersection of processes such as adaptation and internalization, at implementation of basic education, professional education and social self-realization processes. The cognitive model is presented as a complex image, including a mental model and an adaptation model. Factor impact integration gives rise to a complex reaction of the professional socialization factor as a node of intersection of simple loops of education and professional orientation. The cognitive model is a structure for integrating causes and decomposing effects. It allows forming a unified and holistic view of the studied problem of professional socialization of young people and provides the targeted separation of significant knowledge about the situation of professional orientation in the media.

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