Introduction

Timeliness of the problem studied. Young age is an important period when moral attributes and personality’s ethical qualities are being formed. This is the period when the selected values are established further and appropriated. The process of identity formation involves the action of two main forms of value existence:

1) in the instance in which the value acts both as an ideal accepted in the society and which contains the abstract view of the necessity of its accepting by the individual;
2) the values governing the behavior of the individual, which are being established and recognised in the course of some activity.

ABSTRACT

The results of the empirical investigation of the characteristics of value and professional orientation of the students taking studies in social and computer engineering related fields are presented. The types of value structure uncovered depend on the students’ attitudes to the values significant for the professional evolution (active mode of life, creative work, productive life, development, etc.). Value type grouping of students provided is of particular importance.

KEYWORDS

value orientation, cluster analysis, students’ personality evolution, higher professional education, students-programmers

ARTICLE HISTORY

Received 13 June 2016
Revised 17 July 2016
Accepted 21 July 2016
The perceptions of values changed with the development of scientific knowledge and were explained and interpreted in different ways. The concept of value appeared in the classics’ works of Auguste Comte, Max Weber, Herbert Spencer, Emile Durkheim, Karl Marx and John Dewey. In the 20th century, the psychological nature of values considered to be as an important functional component of the personality’s structure through the introduction of virtually identical concepts of ‘value orientation of personality’ and ‘personal values’ were evolved. The concept of ‘value orientation of personality’ is essentially similar to the terms used to describe need and motivation or semantic sphere. For instance, A. Maslow actually sees the notion of ‘values’, ‘needs’ and ‘motives’ as identical ones (Maslow, 1987), according to V. Frankl, considers the notions of ‘values’ and ‘personal meaning to be similar (Frankl, Viktor (1959). Milton Rokeach made a great contribution to the study of the theme. He characterises the values through the following attributes:

- the origins of the values are observed in the culture, society and the individual;
- the impact of the values is observed in almost all social phenomena to be worth studying;
- the total number of values to be the mankind’s heritage is relatively small;
- all people have the same values, although to a varying degree;
- the values are represented in the systems (Rokeach, 1979).

In Russia, the aspects of this process have been the main issue of the psychological, pedagogical, sociological, etc. researches (Gvozdev, V.A., 2012; Ivanova, V.M., 2010; Statinova, N., Ye. Kushchenko, 2011). Various aspects of the influence of values on life choices and productivity activities are considered in the foreign studies (Boer, D. and R. Fischer, 2013; Bardi, A., Buchanan, K.E., R. Goodwin, L. Slabu, Robinson, M. 2013.) The issue of young peoples’ attitude to activity (as a value) which influences social performance, readiness to the professional activities and finally the dynamics of personality’s evolvement as a whole is studied in domestic psychology (Ivanenkov, S.G., Kostrikin, A.V. 2009; Frankl, Viktor, 1959; Kurapina, E.V., 2012). Taking students as an example, the researchers note the decrease in social performance in the given age group. Increase in immaturity [11], fall in adaptiveness and self-discipline of the young people (Rostovtseva, M.V., Mashanov, A.A., Khokhrina, Z.V. 2013) and exhibiting personality traits inherent in young men in the girls’ behavior and vice versa (Tolstoles, Ye.S., Shelekhov, I.L., Berstneva, O.G. 2012.) are of large concern. We can assume that this trend is a consequence of general cultural and moral crisis of the Russian society.
Social performance of a person depends, in the first place, upon his/her value system. Active performance is laid in the structure of value orientation but its ranking in this structure can be extremely low. Currently a pro-active approach to life is more seldom related to the involvement in the country’s social and political activities. According to some authors “When gaining financial independence too early youth demonstrates their reluctance to be involved in the sphere of material production” (Golubkova, N.Ya, 1998). Such a position of the young people is supported by the society’s proclaiming urge towards wealth accumulation and searching the shortest ways to success. Another substitute for active performance can be aspiration for success in the private life. Impossibility or inability to combine both values results in considering active performance to be an obstacle for attaining happiness among the surrounding people. The consequence of that is a contraposition of love, family life, relevant relationships with the loved one to the interesting and productive performance. Often the choice is made in favor of the former to the disadvantage of the latter. It can be assumed that the main value orientation of the young people nowadays is either meeting physical and psychological requirements of the individual or self-actualization in the social active performance and effective activity.

In this connection the peculiar features of value hierarchy of the students whose future occupation is in the fast developing fields to be a social sphere (providing services to the population) and information environment (software, IT technologies) are of particular interest.

The definitions of such terms as values, morality, moral, spirituality are viewed differently. We are guided by both activity approach A.N. Leontyev (2000), S.L Rubinstein (1989), L.S. Vygotsky, (1983) and the school of modern psychology which defines the priority of moral values as a factor of personality’s development represented by B.S. Bratus, V.I. Slobodchikov, V.D. Shadrikov (Znakov, V.V., 2000). The value attributes of a person are the reflection of hierarchical interaction of spiritual and material requirements. The understanding of the specific character of that interaction will allow us to arrange effective work with the students who will become specialists in social and computer engineering spheres.

Material and methods of the investigation.

The goal of our investigation was finding characteristics of value and professional attributes of the students majoring in different fields of study. The object of the research is the structure of students’ value attributes. The subject of the research is characteristics of the structure of value attributes of the students who will be in the future engaged either in social or IT sphere. The fourth-year students of the technical department (65 students) and humanities department (62
students) of Volga State University of Technology took part in the research (the total number of students was 127).

The sampling group consisted of 64 girls and 63 boys aged 20-21. The hypothesis was that the structures of the students’ value orientation aimed at interaction with different social environment refer to different types. To find out the structure of the value orientation, M. Rokeach’s (1979) value survey which gained spreading in the researches of personality’s values was applied (Raigorodsky, D. Ya, 2004).

**The results of the research.** Using the method of cluster analysis (k-means, Euclidean space, Complete Linkage) three types of value orientation were revealed (terminal values). The results obtained are shown in Figure 1.

As it can be seen the main differences refer to such values as active performance, love, productive life, development, freedom, family life, creativity. The part of those values defines the attitude of the young person to the professional activity. Let us study each type of the value orientation in more detail (Table 1).
## Average ranges of value orientation for each type of the value structure

<table>
<thead>
<tr>
<th>Value orientation</th>
<th>Type1</th>
<th>Type2</th>
<th>Type3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active performance (completeness and emotional richness of life)</td>
<td>9</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Wisdom (maturity of judgment, common sense attained through life experience)</td>
<td>12</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Sound health (physical and mental)</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Interesting work</td>
<td>7</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Beauty of nature and art (emotional experience in beauty of nature and art)</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Love</td>
<td>3</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Material well-being (lack of financial strait)</td>
<td>6</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Good and loyal friends</td>
<td>7</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Social recognition (respect of the surrounding people, work team, group, peers)</td>
<td>12</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Cognition (opportunity of education enhancement, range of interests, general culture, intellectual evolution)</td>
<td>13</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Productive life (complete using of one’s abilities and inclinations)</td>
<td>10</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Evolvement (physical and spiritual growth)</td>
<td>10</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Amusements (pleasing, easy pastime, lack of obligations)</td>
<td>14</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Freedom (self-dependency, independence of judgment and deeds)</td>
<td>12</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Happy family life</td>
<td>4</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Happiness of other people (well-being, evolvement and improvement of other people, nation as a whole)</td>
<td>15</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Creative work, creative new products (availability of creative activity)</td>
<td>13</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Self-assurance (lack of internal contradictions)</td>
<td>8</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

The students with value structure of Type 1 are characterized by the urge towards such values as love, physical and mental health and happy family life. Values rejected by the students were beauty of nature and art, well-being, evolvement and improvement of other people, all the nation and amusements.
The students referred to Type 2 aspire to good health and having loyal friends. At the same time, they avoid such values as beauty of nature and art, other people’s happiness, and creative activity.

The students with value structure of Type 3 lack clearly seen preferences. Although the values preferred are good health, loyal, friends, active performance and productive life. The least preferred values in this type are beauty of nature and art and amusements.

Let us denote Type 1 as a value of happiness in the private life, Type 2 as a value of a free mode of life, Type 3 as a value of active and fruitful performance.

**Results and their discussion**

Having analyzed the differences in average indicators of such values as active life, productive life, evolvement, cognition and creativity we have made the following conclusions:

1) Active life as an goal in life is of larger priority for students with value structure of Type 3 and least important for the students aimed at a free mode of life;

2) Productive life is also more important for the students with value structure of Type 3 (value of active life) and the students aimed at well-being in the private life (Type 1) give the medium position to this value in the value hierarchy; students who urge towards the free way of life (Type 2) completely reject this value. The same is typical for the value of evolvement in the structure of values of different types;

3) Cognition is not acceptable as a life goal with the students urged towards well-being in the private life and a free mode of life. However, the students whose aspiration is an active life highly evaluate cognition as their life goal.

4) Creativity in the life of the students urged towards the active life plays the most significant part rather than in the life of those who have value structures of the other two types.

After that, we considered the spreading of students with different types of value structure taking into account students’ field of study (Table 2).

### Table 2.

Ratio of students with different type of value structure in the academic groups of different fields of study

<table>
<thead>
<tr>
<th>Type of the field of study</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Total number (students)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As it can be seen from the table, the students who aspire to well-being in the private life and those who strive for the active life are equally represented in the groups of the technical field of study. Humanities academic groups are largely represented by the students who are aimed at well-being in the private life. The students who prefer a free mode of life are small in number and are more often seen among the technical students.

<table>
<thead>
<tr>
<th></th>
<th>23 (37.1%)</th>
<th>17 (27.4%)</th>
<th>22 (35.5%)</th>
<th>62 (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>36 (59%)</td>
<td>8 (13.1%)</td>
<td>17 (27.9%)</td>
<td>61 (100%)</td>
</tr>
<tr>
<td>Total number</td>
<td>59</td>
<td>25</td>
<td>39</td>
<td>123</td>
</tr>
<tr>
<td>(students)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Conclusion**

Thus, the students urging towards the active life make a larger emphasis on the values to be of significance for the professional activity of any employee (productivity, creative approach to work, development and acquiring knowledge). The students willing to be happy in their private life set those values in the medium position in the value hierarchy, which is explained by the functional role of those values (providing conditions for successful vital activity). Students aiming at a free mode of life compared to the other two types appreciate more values such as freedom, friends and amusements. At the same time, such students are aimed less at the values important for their occupation.

The fact that the recognition of something valuable and following it are not identical phenomena remains to be an issue for further investigation in the field of student’s personality development (Khinkanina, A.L., 2010).

What concerns the methodological approaches and diagnostic tools, it should be noted that the measurement of social activity cannot provide us with the constants. Many factors, such as social and psychological consistency, the influence of the environment and relationship with it, aiming for the cognitive resource and the state of emotional and volitional scope affect the level of personality’s value orientations creating a new purposeful programme. This confirms the methodological position of L.S. Vygotsky on the dynamic and semantic structure of the personality.

The research conducted does not allow us to conclude that the state of the moral affairs among the young people is good (Gvozdev, V.A., 2012). A well-grounded deduction can be made that the decrease in social active performance is the consequence of underdeveloped moral components in the structure of the student’s personality (Khinkanina, A.L., 2004). The characteristics of the ethical layer
of a young person in the first place are determined by the general spiritual and moral crisis. At the same time, the research provided the opportunity to reveal the most convenient and acceptable ways for the young people to perceive moral values. It is the development of the student’s personality through interaction, cooperation in the research, scientific, cultural, and psychological and educational environments. Such opportunities are provided by the modern technological university for the educational activities for the students of different majors.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References


