Correlation the Components of Social Intelligence with Other Types of Intelligence in Person’s Maturity

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Abstract:
In the research of the world level we can see that the main issue of the problem of personality development is aimed at determining the types, indicators and criteria of development. In these research works, the authors propose various methodological tools for diagnosing personality maturity. Although foreign and Uzbek scientists have conducted research on the factors and problems that affect the psychological aspects of personal development, the relevant correlation between the level of person’s education attainment and acquiring a qualification and profession at different ages, the level of development in different periods of career activity and determinant of social intelligence has not been studied as an object of special scientific research. Hence, it is important to study and research the formation of new types of personality development in modern life, the manifestation and development of social intellectual activity of a person. The article construes an experimental study of the correlation of social intelligence with other types of intelligence in personality maturity. It presents the analysis of students' general and social intelligence indicators, as well as the psychological analysis of relationship indicators of female and male students’ social intelligence with other types of intelligence. According to the results of the research, the processes of social intelligence of students have more obvious correlations in relation to the progression of general intelligence, and they have been found to have differences according to the gender differences of the entity.

Keywords: Person’s maturity, social intelligence, social-psychological development, correlation, general intelligence.

Introduction
In the developed countries of the world, scientific and practical research is being carried out in the direction of studying the objective and subjective determinants of social intelligence as a driving potency for personal development. In the scientific researches of British Psychological Society (BPS), European Federation of Psychological Associations (EFPA), American Psychological Association (APA), German Psychological Society (DGPs), basing on the scientific analysis of the stages, sources, origins, and correlations of the factors of personal development, the main focus drive to the problems of developing mechanisms for improving their effectiveness. On the base of “MAPS – A Common Approach to the
Mainstreaming, Acceleration and Policy Support to the Sustainable Development Goals (SDGs)” of the United Nations, a number of projects are being implemented to solve the problems related to the role of social relations, the human personality, his maturity, affecting internal and external factors, activity, experience, to improve knowledge, comprehension and skills of the people taking into account current socio-economic requirements and needs.

**Literature Review**

Personality maturity indicates a high level of social, emotional, moral and intellectual development of a person. Personality maturity is characterized by: a clear motivation for achievement; stable "I-concept"; responsibility; emotional balance; the ability of psychological intimacy with another person and other qualities that indicate his high adaptation. According to the opinions of I. Greenberger and his co-authors, socio-psychological maturity is understood as a combination of a person's responsibility to the social environment surrounding him and his independence (Greenberger, E., Bond, L., 1984). Researchers proposed a model of social-psychological maturity. It includes personal adequacy, interpersonal adequacy, and social adequacy. In addition, the concept of false maturity is distinguished (social maturity has already begun in the adolescent, but psychological maturity has not yet been achieved). Based on the data obtained during the research, N. Galambos reveals that mature adolescents differ in the level of their intellectual performance from their immature and pseudo-matured peers (Davydov V.V., 1970). Results are presented in terms of alienated attention, inhibitory control, cognitive bias, and information processing speed. The study examines whether there is a relationship between "crystallized" and "active" intelligence and maturity. In these studies, no significant correlations were found between operational intelligence and psychological maturity, which allows solving problems, analyzing them, regardless of previous experience (Galambos, MacDonald, Naphtali, Cohen, Cindy M. de Frias 2005).

Conceivably, one of the main difficulties in the study of social intelligence is the lack of development of existing scientific approaches that reveal its nature. In this case, lack of development means conceptual resources that are not fully revealed by the authors; they do not allow to operationalize the relevant concepts and empirically substantiate the theoretical rules of the concepts of social intelligence. It can be seen that the way to increase the level of development of concepts is long and arduous. The most theoretically proven concepts in the field of studying social intelligence can be included only concepts based on the developed author's ideas about the structure of intelligence (D. V. Ushakov, R. Sternberg).

For example, the American psychologist Joy Guilford and his staff (primarily with the project team leaders M. Sullivan and M. Hendricks) researched social intelligence within a framework called the “Guilford Cubic Model of the Structure of Intelligence (SOI)”. In the ternary model, according to its author’s thought, a behavioral component is suitable to social intelligence. Social intelligence is implicated as a summation of 30 abilities implemented in behavioral acts. In addition, abilities that appear in situations with several solutions are distinguished. As a result of generalization, they were called creative social intelligence. However, at the end of a large study, information about the ability to understand other people (M. Sullivan) and agreement with them (M. Hendricks) could not be interpreted within the framework of Guilford's model of intelligence. Hitherto, the most important result of this scientific work was to prove that social intelligence is also an independent type of intelligence (Avlaev O., 2021; Abulkhanova K.A., 1991, 2005, 2006).

Russian scholar D.V. Ushakov, implementing a cognitive approach within the framework of the author's structural dynamic concept of intelligence, considers social intelligence as the ability to understand people and social situations (Abulkhanova K.A., 2005). Under his leadership, a range of interesting works were carried out at
the Russian Academy of Science, Institute of Psychology (RAS IP) revealing various aspects of studying social intelligence, in particular the comparison of its measurement methods (Abulkhanova K.A., 2005). Although research on general abilities and general intelligence in RAS IP has been and is still very active, this approach has not provided a holistic concept of social intelligence (Abulkhanova K.A., 2005). American researcher R. Sternberg developed a triarchic (three-component) concept of intelligence and included the following components: analytical, creative and practical. The development, according to the author, social intelligence belongs to the practical component, which includes socio-cultural and professional contexts that store "uncertain knowledge" (Agapov V.S., 1999).

A large number of researchers have gone the way of adding to various abilities, competencies and characteristics of a person that can be measured social intelligence with the help of using existing methods. They thought that in this way they would measure social intelligence or some specific aspect of it. Unfortunately, the consequence of these characteristics could not have a theoretical basis. For example, S. Greenspan and Dj. Driscoll included social intelligence in adaptive intelligence along with conceptual and practical types of intelligence. The authors distinguished three components of social intelligence: social sensitivity; social intelligence (the ability to make moral judgments); social interaction (ability to solve problems) (Ananev B.G., 2001).

Social intelligence, according to many other authors, is related to the determination and management of a person's behavior in society, what social, demographic and other characteristics are studied, what social group he belongs to, and what social intelligence is considered in the environment, culture and everyday life information is extremely important. Similar information is more fully reflected in the publications devoted to the perceptions of social intelligence of people, cultures and ethnic groups in different regions of the world. Many published empirical studies address the social intelligence of individuals, schoolchildren, and students between the ages of 14 and 23.

An empirical study was conducted in order to determine the differences socio-psychological characteristics of men and women in their individualities, in two age groups (18-23 and 35-40 years old; 4 subgroups, each with 50 people) who evaluated their ability to get along with other people and establish good relationships with them at different levels. The following were included in the group of socio-psychological characteristics: socio-psychological flexibility (composite assessment and structural components) was measured according to the O.G. Posipanov’s methodology; self-confidence (general and structural components) – according to V. Romaic’s methodology; the level of self-monitoring of a person (M. Snyder); author’s scale of communication strengths/difficulties. A significant amount of empirical data was obtained in the study, and their description is beyond the scope of this research work. Below we will focus on the solution of only two issues of this study.

One of the issues was focused on identifying the communication partners they prefer for each of the subgroups formed by age and gender criteria, as well as the partners that cause them to feel the most difficulties when entering into communication.

Preferences in communication were circulated as follows:

- Men aged 35-40 prefer to communicate with men of their own age (46 %), to communicate with women of the same age (22 %), with girls (22 %) and with people over 50 years old (10 %).
- Women aged 35-40 prefer to communicate with women of their own age (47%), to communicate with men of the same age (34%), and the rest - to communicate with boys, girls and teenagers (all 19%);
- Boys aged 18-23 prefer to communicate with girls of their age (50 %), peers (40 %), teenagers (10 %);
- Girls aged 18–23 prefer to communicate with girls of their own age (30 %), young men
(20%), women aged 35–40 (20%), teenagers (20%), 35-40-year-old men (10%).

It was found that women and men over 35 years of age have more harmonious profiles of social-psychological adaptation (that is, successful mastery of its various strategies), as well as significantly higher indicators of self-confidence and the ability to control one's behavior in different social groups.

According to the general conclusion in the context of the presented results, they can be interpreted as evidence that "difficult" groups for communication (teenagers and people over 50 years old) do not receive the much-needed attention for them from the socially active groups of the society.

The developed social skills found in men (ages 35–40) are worked out by them in their social environment with age characteristics from 18 to 40 years, but not when they interact with teenagers. As a result, the latter do not get enough experience of forming mutual understanding with older men, and do not sufficiently master the models of building positive relationships in the course of joint life activities (Burkhanov A., Avlaev O., Abdulkalilova Sh., 2021). Thus, it can be said that developed social skills by themselves and generally high levels of social intelligence are not universal guarantees of successful interaction in different social, age, gender and cultural contexts.

The difficulties of studying social intelligence, reflected in the listed problems, direct researchers’ attention to the search for phenomena close to it in terms of content and functions: social-psychological flexibility and adaptation, social sensitivity, intelligence, social-psychological and communicative abilities, and so on.

Ontologically closest to social intelligence seems to be the phenomenon of socio-psychological maturity. Russian researcher A.L. Juravlev, justifying the separation of "social-psychological maturity" as a relatively independent concept, made a significant contribution to defining the social-psychological components of this phenomenon. The author emphasizes the importance of the characteristics of this phenomenon to include a person in society, in various types and forms of relationships. In addition, the main vector of the manifestation of socio-psychological maturity is the person's orientation towards other people or his general orientation towards other people. Precisely, this focusing characteristic according to A.L. Juravlev, this phenomenon should form the main spectrum of research (Agapov V.S., 1999).

Materials and Methods

Researches were conducted based on the principles of psychology (determinism, unity of mind and activity, development) and concepts in the study of the correlation of social intelligence with other types of intelligence in personality development. Also, Dj. Gilford and M. Sullivan's "Diagnostics of Social Intelligence", Dj. Raven's "Progressive Matrices" test, "Complex analogies" test, N-numbers factor "Separation of important signs", "Practical intelligence" and "Visual intelligence" tests related to spatial perception were used in determining students' mental abilities.

The reason why we use the concepts of social intelligence or emotional intelligence in our research is that at the end of the last century, there were opinions that the growth of mental intelligence alone is not enough for the development of a person. not only that, but it also requires him to be a person who can adapt to social relations, who can feel the experiences of others, who can influence them, who can enter into relationships, and who can adapt his behavior to others. There are many types of intelligence and they manifest themselves in different ways. On the contrary, a person with a high IQ may not meet the requirements or be socially immature in general terms. Some ordinary children can analyze issues related to daily life concerns better than someone with a higher education or academic degree. And it has the ability to analyze the level of education and IQ test results. Taking this into account, we focused on the issue of studying the problem of diagnosing students' intelligence from two
aspects. If we have interpreted the research results on the general (mental) intelligence of students and a number of other intelligences, we will also diagnose the social intelligence of students in accordance with general and other intelligences and draw attention to its dynamics.

Let’s turn to the review of research results of the study of social intelligence (see Table 1).

### Table 1. Indicators of Students' General and Social Intelligences

<table>
<thead>
<tr>
<th>№</th>
<th>Types of Intelligence</th>
<th>M</th>
<th>δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>General Intelligence</td>
<td>89.84</td>
<td>10.52</td>
</tr>
<tr>
<td>2.</td>
<td>Understanding feelings, thoughts and intentions of the interlocutor</td>
<td>3.40</td>
<td>0.58</td>
</tr>
<tr>
<td>3.</td>
<td>Understanding nonverbal behavior</td>
<td>3.50</td>
<td>0.84</td>
</tr>
<tr>
<td>4.</td>
<td>Understanding verbal expression</td>
<td>3.01</td>
<td>0.62</td>
</tr>
<tr>
<td>5.</td>
<td>Analysis of interpersonal interaction</td>
<td>2.90</td>
<td>0.95</td>
</tr>
</tbody>
</table>

When we use Dj. Guilford's methodology in the study of social intelligence in students, its subtests serve to illuminate the aspects of a person's general intelligence. Based on the content of the concept of general intelligence and the characteristics of the methodology, students' ability to communicate and adapt to social conditions, as well as the integrated intellectual ability to perceive people and communicate with them, represents an average value. It can be seen that students should always pay attention to the development of general and social intelligence in the educational process. As their general intelligence (IQ) level was average, they showed a moderately strong level (3.40±0.58) in terms of "Understanding the feelings, thoughts and intentions of the interlocutor" from the criteria representing social intelligence. This leads to the conclusion that students have the ability to predict relations with people in advance, predict the course of events, but it should be developed. If the students had the ability to solve this subtest at a high level, they would be able to give a detailed description of a stranger's identity by looking at his photo. Unfortunately, this aspect of students' social intelligence is above average.

Students also had a higher than average value for understanding non-verbal behavior (3.50±0.84). Students prepare themselves for the work environment, learn non-verbal signals, use non-verbal communication of people, according to posture, facial expressions and behavior, evidence of the basis of assessment skills. If students achieve the formation of this quality in them at a higher level, then this means that their tendency to be active, asthenic, deep reflection, sensitivity to the emotional states of people in communication, and understanding of their own feelings will increase.

The students' scores on the remaining two subtests, i.e. understanding of verbal expression (3.01±0.62) and analysis of interpersonal interaction (2.90±0.95) are close to the average, indicating that these aspects of students' social intelligence are not yet developed at an average level. Let’s try to analyze their correlational relationship using the test criteria that serve to evaluate the social intelligence of students. There is a positive correlation between the criteria for evaluating students' social intelligence. In our analysis of the average value, the correlational relationship confirmed that the students have above average scores on "understanding the feelings, thoughts and intentions of the interlocutor" and "understanding non-verbal behavior" (r=0.401, p<0.05). So, it was confirmed that students' ability to evaluate the general environment, interlocutor's behavior, personal qualities, and experiences is legally dependent on the unity of intellectual abilities of students in interpersonal relations.

### Results

It is natural that the relationship between the results of general intelligence and the amount of social intelligence is important in the development of a person. We managed to identify correlational relationships between all types of intelligence in order to study the relationship between students' social intelligence and other intelligences. (see Table 2.)
Table 2. The Relationship Indicators of Students' Social Intelligence with Other Types of Intelligence

<table>
<thead>
<tr>
<th>Components of Social Intelligence</th>
<th>General</th>
<th>Analogy</th>
<th>Concepts</th>
<th>Visual</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding the feelings, thoughts and intentions of the interlocutor</td>
<td>0.401*</td>
<td>0.189</td>
<td>0.110</td>
<td>0.098</td>
<td>-0.168</td>
</tr>
<tr>
<td>Understanding nonverbal behavior</td>
<td>0.106</td>
<td>0.382*</td>
<td>-0.148</td>
<td>0.172</td>
<td>-0.159</td>
</tr>
<tr>
<td>Understanding verbal expression</td>
<td>0.241</td>
<td>-0.091</td>
<td>0.164</td>
<td>0.094</td>
<td>-0.052</td>
</tr>
<tr>
<td>Analysis of interpersonal interaction</td>
<td>0.290</td>
<td>0.252</td>
<td>0.168</td>
<td>0.028</td>
<td>-0.081</td>
</tr>
</tbody>
</table>

Note: * p < 0.05

There is a correlational relationship between students' understanding of the feelings, thoughts and intentions of the communication participant and their general intelligence (r=0.401, p<0.05), understanding of non-verbal behavior and complex analogies test (r=0.382, p<0.05).

This correlational relationship means that students' growth in mental intelligence is accompanied by an understanding of the interlocutor's feelings, thoughts, and intentions. And the ability to distinguish complex logical relationships helps to understand non-verbal behavior.

Now let's analyze the correlation between their social intelligence and other intelligence indicators using the following table indicators (see Table 3).

Table 3. The Relationship Between Social Intelligence and Other Intelligences of Female Students

<table>
<thead>
<tr>
<th>Components of Social Intelligence</th>
<th>General</th>
<th>Analogy</th>
<th>Concepts</th>
<th>Visual</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding the feelings, thoughts and intentions of the interlocutor</td>
<td>0.490*</td>
<td>0.582**</td>
<td>0.472*</td>
<td>0.531*</td>
<td>0.284</td>
</tr>
<tr>
<td>Understanding nonverbal behavior</td>
<td>0.119</td>
<td>0.190</td>
<td>0.470*</td>
<td>-0.051</td>
<td>0.048</td>
</tr>
<tr>
<td>Understanding verbal expression</td>
<td>0.340</td>
<td>0.249</td>
<td>-0.069</td>
<td>0.150</td>
<td>-0.218</td>
</tr>
<tr>
<td>Analysis of interpersonal interaction</td>
<td>0.460*</td>
<td>0.479*</td>
<td>0.389</td>
<td>0.306</td>
<td>0.071</td>
</tr>
</tbody>
</table>

Note: p<0.05; ** p<0.01

The criteria of social intelligence of female students were able to form a number of positive relationships with other indicators of intelligence. In this case, the ability to understand the feelings, thoughts and intentions of the participant in communication has a positive effect on the growth of social intelligence (r=0.490, p<0.05) and the understanding of complex logical relationships (r=0.582, p<0.01), distinguishing important and unimportant aspects of concepts, and receiving (r=0.472, p<0.05) leads to an increase in processing possibilities by viewing information. It can be seen that unlike the general and other intelligences of students, social intelligence is characterized by more positive research results. This indicates that students are working on themselves in their professional and personal development.

The ability of female students to understand non-verbal behavior, without a doubt, does not cause too many problems in understanding the differences between important and secondary signs of events and things (r=p<0.05). In
student girls' intellects correct correlational connections were also found between interpersonal interaction analysis ability and differentiation of general (r=0.460, p<0.05) and complex logical relations (r=0.479, p<0.05). It can be seen that the relationship between social intelligence indicators and other intelligence indicators is not desolate with positive growth.

The results of male students may be different from those of female students. Our analysis showed that the ability to understand the feelings, thoughts and intentions of the participant in communication according to the general and results of the female students is correctly correlated with the understanding of non-verbal behavior (r=0.381, p<0.05) and the understanding of verbal expression (r=0.489, p<0.05) showed relevance. It appears that students have sufficient understanding and intelligence to prepare themselves for the general environment and relationships, but students have to develop them through life experiences and professional development. Because among the rest criteria of general intelligence no significant result to be observed. Therefore, in the process of education, male students should work on themselves and not leave behind the formation of qualities characterizing social intelligence.

### Discussion

In the relationship between social intelligence indicators and other intelligences of male students, they formed a correct correlation with general intelligence (r=0.458, p<0.05), and the criterion of understanding non-verbal behavior with general intelligence (r=0.466, p<0.05). It is clear from this that the ability of students in communication situations to show intellectually competent behavior in relation to others is important for their mental maturity. In our experience, in students of both genders, general intelligence was able to show a positive and correct correlation with social intelligence, as well as the criteria of understanding the feelings, thoughts and intentions of the participant in communication, and understanding non-verbal behavior (see Table 4).

<table>
<thead>
<tr>
<th>Components of Social Intelligence</th>
<th>Understanding the feelings, thoughts and intentions of the interlocutor</th>
<th>Understanding nonverbal behavior</th>
<th>Understanding verbal expression</th>
<th>Analysis of interpersonal interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding the feelings, thoughts and intentions of the interlocutor</td>
<td>1</td>
<td>0.381*</td>
<td>0.489*</td>
<td>0.158</td>
</tr>
<tr>
<td>Understanding nonverbal behavior</td>
<td>1</td>
<td>0.151</td>
<td>0.330</td>
<td></td>
</tr>
<tr>
<td>Understanding verbal expression</td>
<td>1</td>
<td>0.048</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis of interpersonal interaction</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

It is rewarding that the tendency of male students to understand verbal expression has a relationship with their ability to differentiate concepts according to their important features, that is, logical reasoning abilities (r=0.532, p<0.05). However, male students' ability to analyze interpersonal interaction had an inverse relationship with their ability to differentiate concepts according to their important features, that is, logical reasoning skills (r=-0.530, p<0.05). This shows that the analysis of interpersonal interaction cannot be achieved through verbal comprehension (see Table 5).
Table 5. The Relationship Between Social Intelligence and Other Intelligences of Male Students

<table>
<thead>
<tr>
<th>Components of social intelligence</th>
<th>General</th>
<th>Analogy</th>
<th>Concepts</th>
<th>Visual</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding the feelings, thoughts and intentions of the interlocutor</td>
<td>0.462*</td>
<td>-0.034</td>
<td>-0.348</td>
<td>-0.079</td>
<td>-0.512</td>
</tr>
<tr>
<td>Understanding nonverbal behavior</td>
<td>0.468*</td>
<td>-0.258</td>
<td>-0.159</td>
<td>-0.313</td>
<td>-0.518</td>
</tr>
<tr>
<td>Understanding verbal expression</td>
<td>-0.060</td>
<td>0.112</td>
<td>0.532**</td>
<td>0.285</td>
<td>0.246</td>
</tr>
<tr>
<td>Analysis of interpersonal interaction</td>
<td>-0.249</td>
<td>0.042</td>
<td>-0.530**</td>
<td>0.134</td>
<td>-0.212</td>
</tr>
</tbody>
</table>

It can be seen that the signs of growth in the social intelligence of the students are more obvious than in the general intelligence. There are correlations, albeit relative, among its criteria. The specifics in developing social intelligence of students may be that they need to observe various situations in life, form their own attitudes towards them, and improve life skills in accordance with social situations. And, perhaps this serves as a psychological determinant that ensures the maturity of the student.

Conclusion

When we tried to study the criteria of social intelligence of students by educational field and gender, a number of positive, scientific data were obtained.

1. The criteria of social intelligence of students have more obvious correlations than the criteria of general intelligence, which differ according to the subject's gender differences.

2. Tendencies of male students' ability to understand verbal expression - their ability to differentiate concepts according to their important features, i.e. their ability to make logical conclusions is moderately developed. The ability to analyze them, distinguishing according to the important signs of concepts, that is, weakening the ability to make logical conclusion was observed.

3. It was confirmed that the ability to evaluate the social environment, interlocutors' behavior, personal qualities, and experiences is legally dependent on the intellectual abilities of the students in their interpersonal relations.

4. According to our analysis, the ability to understand the feelings, thoughts, and intentions of the participants in communication relating with a social and female students' results showed a correlation with the understanding of non-verbal behavior and the clear perception of verbal expression.

5. Criteria of social intelligence of female students were able to form a number of positive relationships with other indicators of intelligence. In this case, having the ability to understand the feelings, thoughts and intentions of the participant in communication has a positive effect on the growth of general intelligence and the understanding of complex logical relationships, the ability to distinguish the important and insignificant aspects of concepts leads to an increase in processing possibilities by viewing information, and their professional and personal development shows that it is manifested.

6. In students of both genders, social intelligence reflects the positive and correct correlation with general intelligence, as well as the criteria for understanding the feelings, thoughts and intentions of the participant in communication, and understanding non-verbal behavior.

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