



METHODS OF EXPERT ASSESSMENT OF STUDENTS' RELATIONSHIPS IN DISTANCE EDUCATION IN THE METHOD OF STRELYAU Y.A.

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Abstract

This article presents expert assessment methods based on the concepts of Strelyau Ya. and Kuznetsova A.M. in the assessment of student behavior in distance education. On the basis of criteria, it is possible to assess the level of student learning, stability, continuity in activities and psychological reactions. Each methodology is based on the sum of points, and these results are presented graphically. Through the statistical results of the assessment, it will be possible to determine whether the student is the same or changed. The article describes the evaluation mechanism with analysis, tables and graphs, by the example of a real learning process.

Keywords: Distance learning, student behavior, expert assessment, strelyau concept, kuznetsova methodology, evaluation criteria, level of uniformity, graphic analysis.

Introduction

In modern distance education systems, the need for constant monitoring of student activity and behavior is increasing. Traditional assessment methods are usually based on level of knowledge, however, in order to gain a deeper understanding of a student, it is also important to determine his or her behaviors in the learning process. In this article, Strelyau Ya. and Kuznetsova A.M. Expert evaluation methods developed on the basis of the concepts are presented. These methods allow



you to determine the degree of continuity and consistency of students according to various criteria and assess differences in their learning behavior.

Strelyau Ya. Expert assessment methodology of student behavior in distance education

Strelyau Ya. The methodology developed on the basis of the concept of student behavior proposes to use ten types of criteria (criteria) in assessing student behavior. Each criterion is evaluated on a five-point system. As a result, a student can get a maximum of 50 points, and a minimum of 10.

In this grading system, it should be taken into account that the lower the level of uniformity of behavior (i.e. consistency or stereotype), the lower the scores obtained. Such an approach, first of all, serves to simplify the reception and analysis of quantitative results. So:

50 points - indicate the uniformity of the student's behavior at the highest level;

10 points denotes the minimum level of this indicator.

In the evaluation process, each criterion is evaluated on the basis of real and observable patterns of behavior.

1 point – if the criterion does not at all correspond to the student's behavior;

5 ball – agar mezon to‘liq mos kelsa;

Score 3 indicates the activity of the criterion at the average, that is, at the normative level.

At the end of the assessment, the sum of the points obtained on all ten criteria is calculated and the result is retained. This result is then compared to the average score (reference value) obtained on the basis of previous tests. The closer the assessment result is to the average value, the closer it is determined that the student's behavior is close to what it was in previous tests.

According to Strelyau's concept, on the basis of the difference of a student's current score in percentage terms with the average score, it is determined that he belongs to a certain area (category) of behavior.

Interpretation of the results of the assessment of student behavior according to Strelyau's methodology

0–40 and 161–200 units – Based on these results, we can confidently say that this is not the same student who completed the previous assignment or courses. His current behavior is completely inconsistent with the behavior that has been observed before.



Units 41–50 and 151–160 – Maybe this is not the same student either. In general, his behavior is different from the previously identified behavior, but there is also no reason to say that he is a completely different student. It is possible that psychological factors or other unknown reasons influenced the results this time.

Units 51–70 and 131–150 – It can be assumed that this may be the same student. It is impossible to draw a definitive conclusion at such an interval, however, while the student's current behavior does not match well with what has been observed previously, the probability of being judged as the same student is slightly higher.

Units 71–80 and 121–130 – Maybe this is the same student. His current behavior is generally consistent with his previous behavior, but it's still hard to say with confidence about it.

Units 81–120 – Based on the result in this range, it can be safely said that this is the same student, because his current behavior is completely consistent with the previously identified behavior.

Criteria for determining the uniformity of behavior in distance education (10 criteria)

We will now outline ten criteria that will be used to determine the uniformity of a student's behavior within the framework of a distance education course:

Can a student study for a few hours without breaks?

- 1 point: constantly (even in minutes) stops working.
- 5 points: can work continuously for a long time.

Can a reader with constant attention?

- 1 point: cannot concentrate during study, the environment is distracting.
- 5 points: fully immersed in the activity, no distractions are affected.

Is it stable in terms of academic failure?

- 1 point: stops learning after failure.
- 5 points: does not get discouraged after failures, continues.

Does he happily care for important assignments?

- 1 point: tries to evade responsibility, tends to be submissive.
- 5 points: wants to lead, takes responsibility.

Can it work in an uncomfortable environment?

- 1 point: can study only in an isolated, comfortable environment.
- 5 points: Have the ability to study in any difficult, even difficult conditions.

Will they stop learning when they run into obstacles?

– 1 point: leaves the activity even after minor obstacles.

– 5 points: No obstacle can stop him.

Does he maintain his usual behavior in control cases?

– 1 point: behaves differently than usual.

– 5 points: behaves exactly the same as normal.

Are the results of the control and typical training the same?

– 1 point: completely different results.

– 5 points: identical or very close results.

Does he happily complete assignments that require a great deal of effort?

– 1 point: avoids activities that are exhausting.

– 5 points: Likes work that requires a strong will.

Is the behavior on the last assignment from the long break the same as the previous one?

– 1 point: the behavior has completely changed.

– 5 points: the behavior is fully consistent.

The average grades obtained by the student on these 10 criteria are now reflected in Table 1 (stated in the text, if any). After that the final conclusion on Strelyau's method is made.

Table 1 – Average grades of a student on ten criteria

Criterion Number	Number of points
1	3
2	5
3	4
4	2
5	5
6	1
7	3
8	2
9	5
10	4

The average score was 34 points.

Now let's look at the screen form shown in Figure 1, which states:

red – current results,

Blue represents average results.

In the process of mastering the last course, the following results were obtained, they are presented in Table 2.

Table 2 – Student course results according to ten criteria

Criterion Number	Number of points
1	4
2	3
3	4
4	5
5	5
6	4
7	5
8	3
9	4
10	1

The average results total was 38 points.

Because the percentage of the number 38 relative to the average grade falls on the area of behavior from 71 to 80, so it is safe to say that this is exactly the same student.

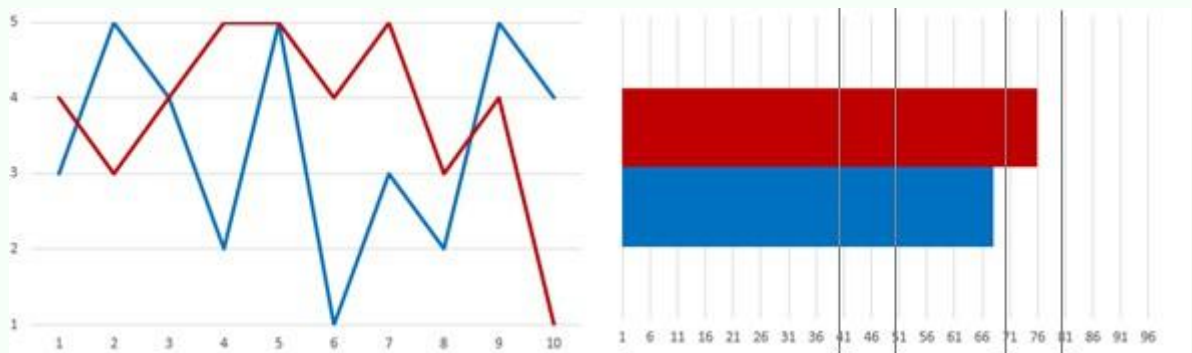


Figure 1 – Strelyau Ya. Expert assessment on concept

Now let's look at the screenshot shown in Figure 2. Then:

red indicates the current (i.e. current) results,

Blue denotes average results.

In the process of mastering the last course, the student showed the following results, which are listed in Table 3.3.

Table 3 – Student course results according to ten criteria

Criterion Number	Number of points
1	3
2	3
3	3
4	1
5	3
6	1
7	3
8	1
9	2
10	3

The average total was 23 points.

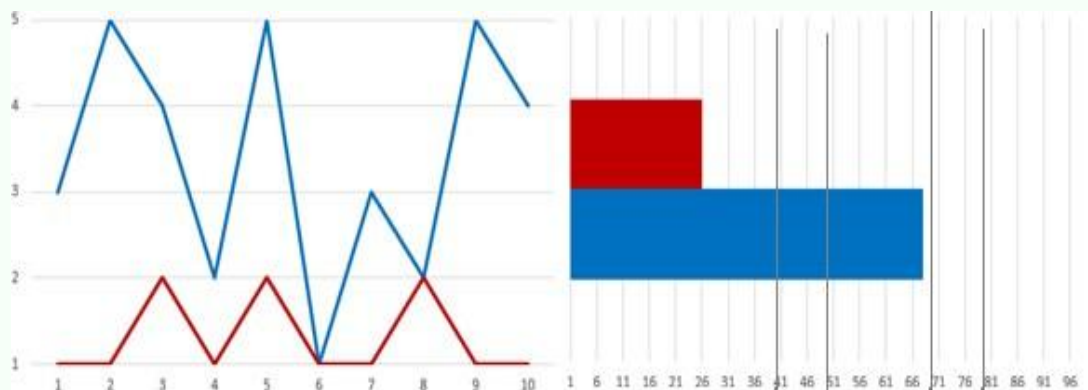
Because the percentage of 23 numbers relative to the average score falls in the behavioral area of 41 to 50,

Therefore, it may be the same student, but it cannot be confirmed with confidence.

Now let's look at the screen shape shown in Figure 3. In this form:

red – the results of the current (i.e. recent) assessment,

And blue represents the average grades.



The results of the student in the process of mastering the last course are presented in Table 3.4.

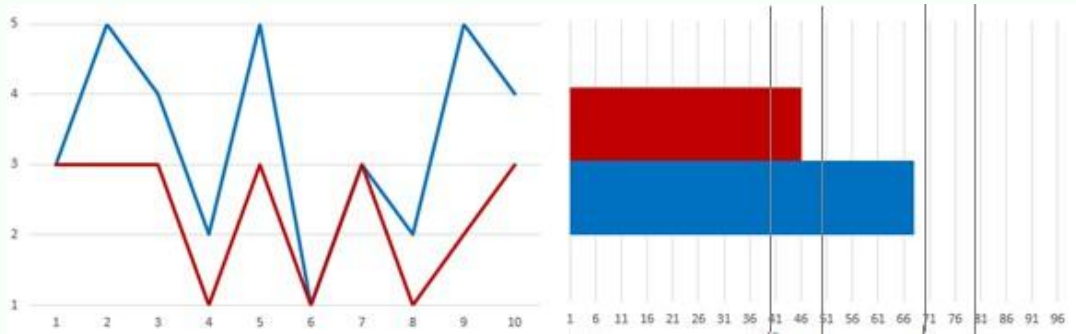


Table 4 – Student course results according to ten criteria

Criterion Number	Number of points
1	1
2	1
3	2
4	1
5	2
6	1
7	1
8	2
9	1
10	1

The average score was 13 points.

Because the percentage of the number 13 relative to the average score falls in the behavioral area from 0 to 40,

Therefore, it can be safely said that this is not a student in previous assessments.

In summary, we can say that we are Strelyau Ya. concept of point distribution algorithm and parameters. With the help of this methodology, it is possible to give an expert assessment of the student's behavior in mastering a distance education course.

Methods of expert assessment of student behavior based on the concept of Kuznetsova A.M.

The methodology developed on the basis of the concept of Kuznetsova A.M. proposes to assess the behavior of a student on the basis of 6 distinctive characteristics (qualities). Each feature is scored on a four-point system (1 to 4).

Natijada felled:



I have 24 balls.

At the very least, it can get 0 points.

Here, too, the lower the level of uniformity of behavior, the lower the student's score. This approach is designed to favorably accept numerical results. I mean:

24 points - the maximum level of uniformity;

0 points denotes minimal uniformity.

Each trait is evaluated on the basis of concrete, observable behavioral patterns:

1 point – if this feature does not correspond at all to the student's actions;

4 points – if this attribute matches completely;

A score of 2 is a moderate match, which means that the trait is partially manifested.

Stage after assessment:

Points earned on all six traits will be cumulative.

Result:

The closer to 24 points, the more appropriate a student's current behavior is to his or her previous condition.

The final score is expressed as a percentage of the average score and it is allocated to a specific area of behavior.

Assessment by areas of behavior (based on the concept of Kuznetsova A.M.):

0-50 and 151-200 units – It is safe to say that this is not the same student who completed the previous assignment or courses. The behavior differs dramatically from what was previously observed.

Units 51–65 and 136–150 – Maybe it's a different student. In general, the behavior differs from the previous one, but for reasons either psychological or other unknown reasons, it is possible that the condition occurred.

Units 66–80 and 121–135 – Maybe this is the same student. The behavior is generally consistent with the former, but it is impossible to draw conclusions with certainty.

81–120 units – If it is in this range, it can be safely said that it is the same student, because the behavior is exactly consistent with the one in the previous assessments.

The six characteristics for behavior detection are as follows:

Is the student's behavior different in the control work than in the normal assignments?

– 1 ball – agar farq qilsa;

– 4 points – if there is no difference.



Will the student continue to complete the assignment after the first attempt fails?

- 1 point – if he is upset and does not try again;
- 4 points – if the attempt continues.

Is the speed at which you complete the current quest similar to other types of quests?

- 1 point – if the speed differs;
- 4 points – if the speed is the same.

Is the result in the current task similar to the result of another similar task?

- 1 point – if the results differ sharply;
- 4 Balls – Previous Grandson's Moss Bolsa.

Will the student complete the assignment without breaks?

- 1 point - if you work often;
- 4 ball – agar tanaffussiz bajarsa.

Is the range of assignments (breaks) in this course similar to those in other courses?

- 1 point – if the range is completely different;
- 4 members – oral agar mos bo'lsa.

In the next phase, the student's average grades on these 6 traits are shown in Table 5.

Based on this table, an evaluation algorithm runs and the results are graphically described.

Table 5 – Average grades of students on six criteria

Criterion Number	Number of points
1	3
2	4
3	4
4	3
5	4
6	4

The average score total was 22 points.

Now let's look at the screen shape shown in Figure 4. Then:

red indicates the current (i.e. recent) results,

Blue denotes average (previous) results.

The student's results in the process of mastering the last course are listed in Table 6.

Table 6 – Student course results according to six criteria

Criterion Number	Number of points
1	3
2	4
3	4
4	2
5	4
6	3

The average results sum was 20 points.

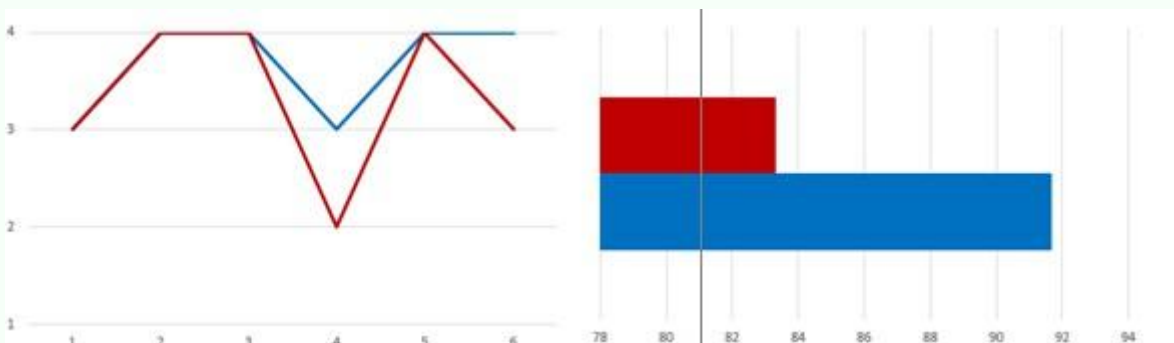


Figure 4 – expert assessment based on the concept of Kuznetsova A.M.

Now let's look at the screen form shown in Figure 5. In this form:

red – the current (latest) assessment results,

Blue denotes average (previous) results.

The results obtained by the student in the process of mastering the last course are shown in Table 7.

Table 7 – Student's course results according to six criteria

Criterion Number	Number of points
1	3
2	3
3	3
4	2
5	4
6	2

The average score was 17 points.

Because the percentage of the number 17 relative to the average grade falls in the behavioral area of 66 to 80, so it can be assumed that this may be exactly the same student.

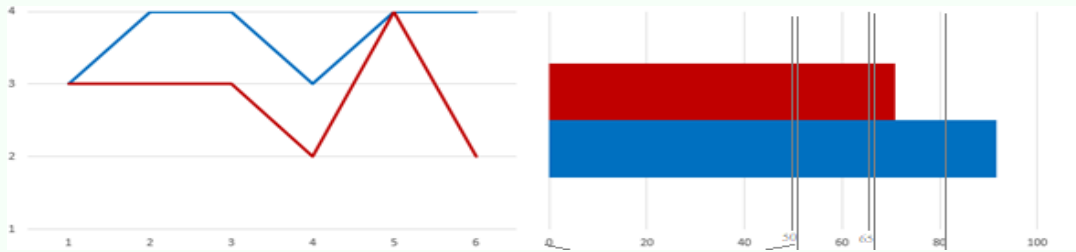


Figure 5 – Expert assessment based on the concept of Kuznetsova A.M.

Now let's look at the screenshot shown in figure 6. In this form:

red – the current (latest) assessment results,

Blue denotes average (previous) results.

The student's results during the last course are presented in Table 8.

Table 8 – Student course results according to six criteria

Criterion Number	Number of points
1	2
2	4
3	2
4	2
5	2
6	2

The average results total was 14 points. Because the percentage of the number 14 relative to the average grade falls in the behavioral area from 0 to 50, so it can be safely said that this is not exactly the same student.

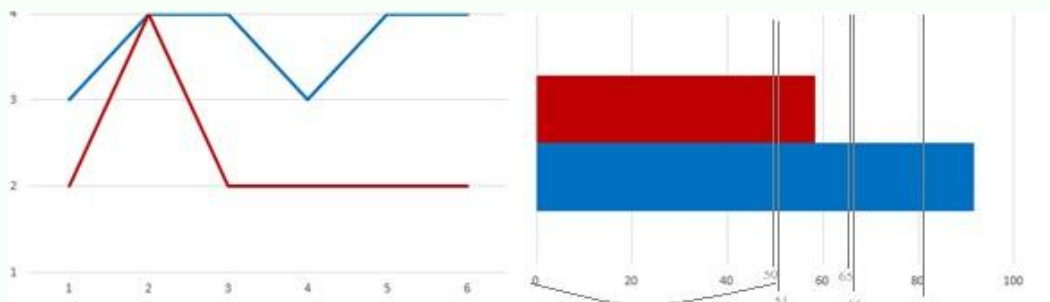


Figure 6 – Expert assessment on the basis of the concept of Kuznetsova A.M.



In conclusion, we considered the algorithm and parameters of point distribution based on the concept of Kuznetsova A.M. With the help of this approach, an expert assessment of a student's behavior in the process of mastering a distance education course is possible.

Conclusion

According to the results of the study, the assessment methodologies developed on the basis of the Strelyau and Kuznetsova concepts show a high efficiency in the accurate and reliable analysis of student behavior. Through graphical and statistical analysis, it is possible to assess the student's current activity by comparing it with his previous results. And this allows to clarify the identity of the student in distance education, as well as to individualize the lesson process psychologically. Through methodologies, teachers will be able to make important decisions to improve the quality of education.

References

1. Yakubov M.S. "Katta scaledli ob'ektlar elektron hujjat ailanish tizimini tizimli taglili: sistemnyi analiz elektronogo dokudorotrot sistema krupnykh ob'ektva." *Young Specialist*, no. 2, 2023, pp. 43–55.
2. Якубов М.С. "Таълим соҳасида электрон ҳужжат айланиш тизимини жорий этишнинг ўзига хос хусусиятлари: specific characteristics of the implementation of the electronic document circulation system in the field of education." *Young Specialist*, no. 2, 2023, pp. 45–53.
3. Yakubov M.S. "Ta'lim tizimida elektron hujjat ailanishini takomillashtirish omillari." *Online Journal of Sustainability and Leading Studies*, vol. 3, 2023, pp. 145–149.
4. Yakubov M.S. "The sphere of large-scale education, technical and organizational support of electronic document interchange." *Online Journal of Sustainability and Leading Studies*, vol. 3, no. 12, Dec. 20, 2023, pp. 163–170.
5. Bekmammedov B. "The development strategy and importance of online education system." *DTAI–2024 1.DTAI*, 2024, pp. 436–439.
6. Yakubov M.S., " The Role of Electronic Healthcare in the Formation of the Society." *Pedagogs*, no. 54, 2024, pp. 113–118.



7. Mansurova M.Y. Bekmukhammedov Bunyodbek, and Jumaboev Behzod. "Optimizing workforce dynamics: a comparative analysis of regional." *JournalNX*, vol. 10, no. 3, 2024, pp. 1–7.
8. Якубов М.С. "Таълим тизимида структуралашган маълумотлар алмашинувининг ўзига хос хусусиятлари." *Iqro Indexing*, vol. 8, no. 2, 2024, pp. 247–254.
9. Bekmukhammedov B.N., Fayzullayev Sh.Sh. "Influence of Artificial Intelligence on Decision Making and Online Education in Online Education." *Journal of IQRO – IQRO JURNALI*, vol. 12, no. 1, 2024, pp. 102–110. <https://www.worldlyknowledge.uz/index.php/iqro/issue/archive>
10. Bekmuhammedov B., Tokhtasinov A. "Development of Distance Learning Models in the System of Continuous Professional Education." *YANGI O‘ZBEKISTON, YANGI TADQIQOTLAR JURNALI*, vol. 3, no. 1, 2025, pp. 99–105.
11. Bekmukhammedov B. "Artificial intelligence and machine learning technologies in forming online education systems." *International Multidisciplinary Journal of Research and Development*, vol. 1, no. 3, 2025, pp. 230–235.
12. Yakubov M.S. and Bekmukhammedov B.N. "Application of Artificial Intelligence in Person-Centered Online Learning System." *The Descendants of Al-Fergani*, vol. 1, no. 1, 2025, pp. 35–39.