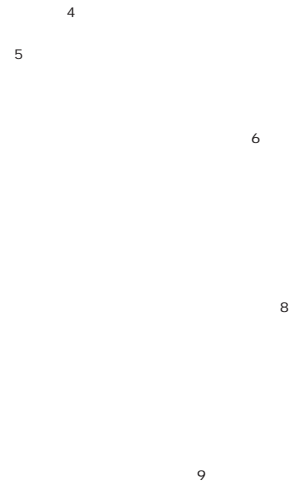

1

1

2*

1.



1.2

		1	1
		A	B
		B11	
A1		B12	
		B13	
		B21	
A2		B22	
		B23	
		B31	
A3		B32	R Python
		B33	
		B41	
A4		B42	
		B43	
		B51	
A5		B52	
		B53	

2

2.1

2.2

AHP

¹²

2

2

	A1	A2	A3	A4	A5	
A1	1	1/2	1/3	1/2	1/4	0.0798
A2	2	1	1/2	1/3	1/3	0.1115
A3	3	2	1	1/2	1/3	0.1731
A4	2	3	2	1	1/3	0.2284
A5	4	2	3	3	1	0.4072

2

$$= \begin{pmatrix} 1 & 1/2 & 1/3 & 1/2 & 1/4 \\ 2 & 1 & 1/2 & 1/3 & 1/3 \\ 3 & 2 & 1 & 1/2 & 1/3 \\ 2 & 3 & 2 & 1 & 1/3 \\ 4 & 2 & 3 & 3 & 1 \end{pmatrix}$$

$$\lambda = \sqrt[5]{1 \cdot 2 \cdot 3 \cdot 4 \cdot 5} \quad (\lambda = 1, 2, 3, 4, 5)$$

$$\lambda = 0.4611, 0.6444, 1.0000, 1.3195, 2.3522$$

$$= (0.0798, 0.1115,$$

$$0.1731, 0.2284, 0.4072)$$

$$\lambda_{max} = 5.0829 = \frac{\lambda_{max} - 5}{4} = 0.0207.$$

3

()

< 0.1

> 0.1

< 0.1.

3

3

1	2	3	4	5	6	7	8	9
0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45

$$1 = 5 = 1.12$$

$$= \frac{0.0207}{1.12} = 0.0185 < 0.1$$

15

B

A1 ~ A5

B-A

= 1 2 3 4 5

4 ~ 8

4 B-A1

	B11	B12	B13	
B11	1	2	4	0.5842
B12	1/2	1	1	0.2318
B13	1/4	1	1	0.1840

5 B-A2

	B21	B22	B23	
B21	1	1/2	1/3	0.1634
B22	2	1	1/2	0.2970
B23	3	2	1	0.5396

6 B-A3

	B31	B32	B33	
B31	1	1	3	0.4434
B32	1	1	2	0.3874
B33	1/3	1/2	1	0.1692

7 B-A4

	B41	B42	B43	
B41	1	1/2	4	0.3586
B42	2	1	3	0.5171
B43	1/4	1/3	1	0.1243

8 B-A5

	B51	B52	B53	
B51	1	1/3	1/4	0.1172
B52	3	1	1/3	0.2684
B53	4	3	1	0.6144

0.0368 4 ~ 8 B A1 ~ A5 0.0268 0.0046 0.0091 0.0539
 0.0462 0.0079 0.0158 0.0930 0.0634 0.1

= * = 1, ,5; = 1,23

9

9

A		B		%
		B11	0.584	4.660
A1	0.0798	B12	0.232	1.850
		B13	0.184	1.470
		B21	0.163	1.820
A2	0.1115	B22	0.297	3.310
		B23	0.540	6.020

续表

A		B		%
		B31	0.443	7.680
A3	0.1731	B32	0.387	6.710
		B33	0.169	2.930
		B41	0.359	8.190
A4	0.2284	B42	0.517	11.810
		B43	0.124	2.840
		B51	0.117	4.770
A5	0.4072	B52	0.268	10.930
		B53	0.614	25.020

3

3.1

10		9		10	
		10			
B11	6			0.28	
B12	7			0.13	
B13	6			0.09	
B21	8			0.15	
B22	9			0.30	
B23	10			0.60	
B31	8			0.61	
B32	8			0.54	
B33	9			0.26	
B41	7			0.57	
B42	8			0.94	
B43	8			0.23	
B51	8			0.38	
B52	7			0.76	
B53	9			2.25	
	7.87			8.10	
10		7.87		8.10	

9.5

8

9.5

3.2

40

2 3 C1

C2 C3 11

= 0.3586, 0.5171, 0.1243 .

11

	C1	C2	C3	
C1	1	1/2	4	0.3586
C2	2	1	3	0.5171
C3	1/4	1/3	1	0.1243

12

1 max max = 1,

2

3 = $\frac{\quad}{\max}$

4 = $\frac{\quad}{\quad}$

= 1

12

01	95	10	10	10	10.00	0.032	3.004
02	85	8	8	7	7.88	0.025	2.117
03	87	9	10	10	9.64	0.030	2.652
04	70	7	6	4	6.11	0.019	1.353
05	70	8	6	6	6.72	0.021	1.487
06	75	7	6	7	6.48	0.021	1.538
07	76	6	7	6	6.52	0.021	1.566
08	94	9	9	10	9.12	0.029	2.712
09	90	9	9	10	9.12	0.029	2.597
10	82	8	8	9	8.12	0.026	2.107
11	95	10	10	10	10.00	0.032	3.004
12	78	8	7	7	7.36	0.023	1.815
13	92	10	10	10	10.00	0.032	2.909

续表

14	80	10	10	10	10.00	0.032	2.530
15	85	10	10	10	10.00	0.032	2.688
16	60	5	5	4	4.88	0.016	0.925
17	70	7	8	6	7.39	0.023	1.636
18	60	5	4	6	4.61	0.015	0.874
19	85	10	10	7	9.63	0.030	2.588
20	82	9	10	8	9.39	0.030	2.436
21	86	10	10	8	9.75	0.031	2.652
22	83	10	10	8	9.75	0.031	2.560
23	90	10	10	10	10.00	0.032	2.846
24	78	7	8	6	7.39	0.023	1.823
25	80	7	10	8	8.68	0.027	2.195
26	75	7	6	6	6.36	0.020	1.508
27	55	5	5	3	4.75	0.015	0.826
28	80	8	7	7	7.36	0.023	1.862
29	90	10	10	10	10.00	0.032	2.846
30	56	5	4	4	4.36	0.014	0.772
31	89	10	10	10	10.00	0.032	2.814
32	62	6	6	5	5.88	0.019	1.152
33	60	6	5	4	5.23	0.017	0.993
34	70	7	6	5	6.23	0.020	1.380
35	85	8	9	6	8.27	0.026	2.223
36	85	8	9	7	8.39	0.027	2.256
37	86	9	8	7	8.23	0.026	2.240
38	88	10	10	9	9.88	0.031	2.748
39	75	6	7	6	6.52	0.027	1.546
40	70	7	6	5	6.23	0.020	1.380

12

81.16

78.85

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Research of Classroom Teaching Quality Evaluation System based on Analytic Hierarchy Process

—Taking Probability Theory and Mathematical Statistics as an Example

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Abstract The evaluation system of classroom teaching quality is an important link in the entire teaching process and also occupies an important position. The traditional classroom teaching quality evaluation model is single and the evaluation standard is fixed which is difficult to reflect the current classroom teaching effect to a