

Diagnosing Creative Behaviours of Pedagogy Students

Abstract

The article demonstrates the research results that the author collected while carrying out the programme in Psychopedagogical diagnostics with students of the Faculty of Pedagogy. In the course of acquiring competences in the field of diagnostics, students become familiar with a number of diagnostic tools. The aim of one of the classes in the cycle was to familiarize the students with S. Popek's Creative Behaviours Questionnaire. The implementation of a teaching objective formulated in such a manner concurrently enabled a cognitive objective: an accurate determination of levels of creative and imitative attitudes in 20–30-year old undergraduates of pedagogy. The author deemed it imperative for each student to evaluate the results of the Questionnaire in person. On the meta-analysis level it was considered significant to examine the distribution of creative and imitative attitudes of educationalists in compliance with nationwide norms. The research was conducted on the premises of three universities in three different cities in Silesia. The study group encompassed 116 persons and the non-random selection was determined by the membership in a group of full-time and part-time programmes.

Keywords: *creative behaviours, conformity, non-conformity, heuristic behaviours, algorithmic behaviours*

Introduction

The author conducts classes with students of the pedagogy programme. For many years, while carrying out the programme on *Psychopedagogical diagnostics* or elective courses *Art therapy, Non-verbal techniques in therapy, Dyslexia, dysgraphia, dyscalculia and etc.*, she has been conducting comparative studies with the use of the Creative Behaviours Questionnaire (S. Popek, 2004). The publication, aside from the tool description, constitutes an excellent source of psychological knowledge on a human's creative inclinations. KANH Creative Behaviour Questionnaire, completed by teachers, is widely used in the diagnosis of special aptitudes of young people, especially students of art schools. In the described studies the author applied the KANH questionnaire as a reliable method of self-analysis of one's own attitudes by in-service teachers, or those intending to work as teachers after completing higher education. As a valued lecturer, being invited to classes at various universities, the author has the ability to conduct a comparative analysis, resulting also from her own cognitive curiosity: Which university has the highest level of creative attitudes among the pedagogy students?

Research Methodology

On the meta-analysis level it was considered significant to examine the distribution of creative and imitative attitudes of educationalists in compliance with nationwide norms. The research was conducted on the premises of three universities in three different cities in Silesia. The study group encompassed 116 persons and the non-random selection was determined by the membership in a group of full-time and part-time programmes. The groups in the state university included no fewer than 20 students.

Creative Behaviours Questionnaire allows for efficient determination of the proportions in the scope of personality and intellectual traits. It measures conformity and non-conformity, algorithmic and heuristic behaviours, creative and imitative attitudes. The imitative attitude is signified by the dominance of results in the K and A scale. Creative attitudes result from the dominance of N and H scales.

The indicators of conformity are: dependence, passivity, adaptive rigidity, stereotypicality, deference, weakness, timidity (fear), subordination, inability to cope on one's own, inhibition, defensiveness, weak resistance and perseverance, irresponsibility, lack of criticism, intolerance, and a low sense of one's self-esteem.

The indicators of non-conformity are: independence, activeness, vitality, adaptive flexibility, originality, consequence, courage, dominance, self-organization, spontaneity, expressiveness, openness, resistance and perseverance, responsibility, criticism, tolerance, and high sense of one's esteem.

The indicators of algorithmic behaviours are: directed perceptiveness, mechanical memory, imitative memory, convergent thinking, reproductive learning, directed learning, learning through understanding, intellectual rigidity, cognitive passivity, low reflexivity, imprinting, low construction ability and skill, verbal imitativeness, lack of technical ingenuity, and lack of artistic inclinations.

The indicators of heuristic behaviours are: independence of observations, logical memory, creative imagination, divergent thinking, reconstructive thinking, independent learning, learning through comprehension, intellectual flexibility, cognitive activity, high reflexivity, intellectual independence, creativity, high construction ability and skill, verbal creativity, technical skill, and artistic inclinations.

Each group of students learns about the Creative Behaviour Questionnaire during the Psychopedagogical diagnostics classes. Each student fills in the questionnaire on their own, learns about various methods of analysis, both arithmetic and visual, calculates their own scores. The calculations are checked and corrected. During the subsequent classes, a chart of the whole group is presented anonymously with the use of letters or numbers to indicate the different participants of the questionnaire. Each participant can check their position, the dominance of each of the scales, the scope of this dominance, as well as the dominance of attitudes. The participants do not know to whom each symbol refers. They are not exposed to risk or ridicule. The chart constitutes purely visual information on how each participant fares compared to the rest of the group.

Table 1 below presents norms for four scales of KANH Creative Behaviour Questionnaire.

Table 1. Norms for the KANH scale

STEN	LEVEL	CONFORMITY	ALGORITHMIC BEHAVIOURS	NON-CONFORMITY	HEURISTIC BEHAVIOURS
10	HIGH	20–25	22–25	27–30	26–30
9	HIGH	18–19	20–21	25–26	25
8	HIGH	16–17	18–19	23–24	22–24
7	HIGH	13–15	16–17	21–22	20–21
6	AVERAGE	11–12	14–15	19–20	19
5	AVERAGE	8–10	13	18	17–18

STEN	LEVEL	CONFORMITY	ALGORITHMIC BEHAVIOURS	NON-CONFORMITY	HEURISTIC BEHAVIOURS
4	LOW	6-7	11-12	16-17	15-16
3	LOW	4-5	9-10	13-15	13-14
2	LOW	3	8	12	11-12
1	LOW	0-2	0-7	5-11	5-10

Research Results

Chart 1 below and subsequent charts present results for selected groups. The results were visualised in various ways, on purpose. The tool offers a multitude of possibilities for processing the results and comparing the intra- and extramural groups of various majors (in this case – pedagogy), of various colleges.

Group 1. N=9, Private higher education institution, intramural group, bachelor degree studies, year III semester VI

Chart 1. Results for scales K and A for group 1

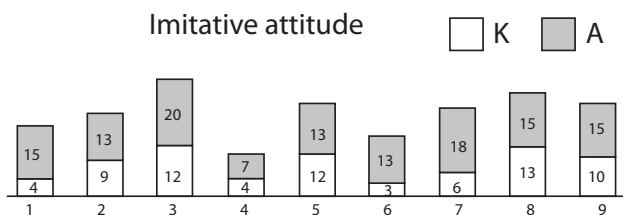


Chart 2. Results for scales N and H for group 1

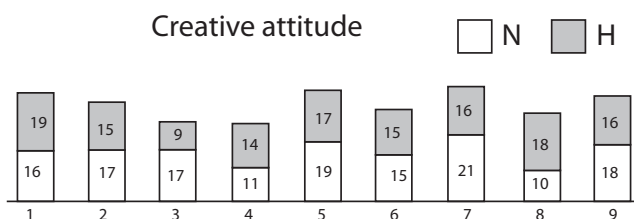


Table 2. Individual results in group 1, sum of scales K and A, N and H

Group 1	1.	2.	3.	4.	5.	6.	7.	8.	9.
K+A	19	22	32	11	25	16	24	28	34
sten	4	4	7	1	5	3	5	5	7
level	l	l	h	l	a	l	a	a	h
N+H	35	32	26	25	36	30	37	28	34
sten	5	4	2	2	5	3	6	3	5
level	a	l	l	l	a	l	a	l	a

In this small group it was determined that the creative attitude is dominant among 7 people, in person 1, by 16 pts. In subsequent cases this dominance is higher by 10, 14, 11, 14, 13, 9 points. The dominance of the imitative attitude is present only in one person (case 3). The balance of attitudes occurs in the case of person 8.

Generally speaking, in group 1 there are four people who exhibit an imitative attitude at a low level, 3 people – at an average level, 2 people – at a high level. It was found that 5 cases exhibit a creative attitude at a low level, while 4 people exhibit a creative attitude at an average level.

It is impossible to interpret these charts without a table containing the following data:

Table 3. Norms for the dominance of scale N over K, scale H over A.

Differences N-K		Differences H-A		LEVEL
RAW RESULT	STEN	RAW RESULT	STEN	
+22 +30	10	+16 +25	10	HIGH
+17 +21	9	+13 +15	9	HIGH
+15 +16	8	+11 +12	8	HIGH
+11 +14	7	+7 +10	7	HIGH
+9 +10	6	+4 +6	6	AVERAGE
+5 +8	5	+1 +3	5	AVERAGE
+2 +4	4	-2 0	4	LOW
-2 +1	3	-6-3	3	LOW
-4-3	2	-8-7	2	LOW
-15-5	1	-15-9	1	LOW

In group 1 the difference in the results for scales N and K was as follows:

Table 4. Differences N-K in group 1

Group 1	1.	2.	3.	4.	5.	6.	7.	8.	9.
N-K	12	6	5	7	7	12	15	-3	8
sten	7	5	5	5	5	7	8	2	5
level	h	a	a	a	a	h	h	l	a

3 people exhibited a high dominance of non-conformity, 5 people – average, 1 person – low.

In group 1 the difference in the results for scales H and A was the following:

Table 5. Differences H-A in group 1

Group 1	1.	2.	3.	4.	5.	6.	7.	8.	9.
H-A	4	2	-11	7	4	2	2	3	1
sten	6	5	1	7	6	5	5	5	5
level	a	a	l	h	a	a	a	a	a

1 person exhibited a high dominance of heuristic behaviours, 7 people – average, 1 person – low.

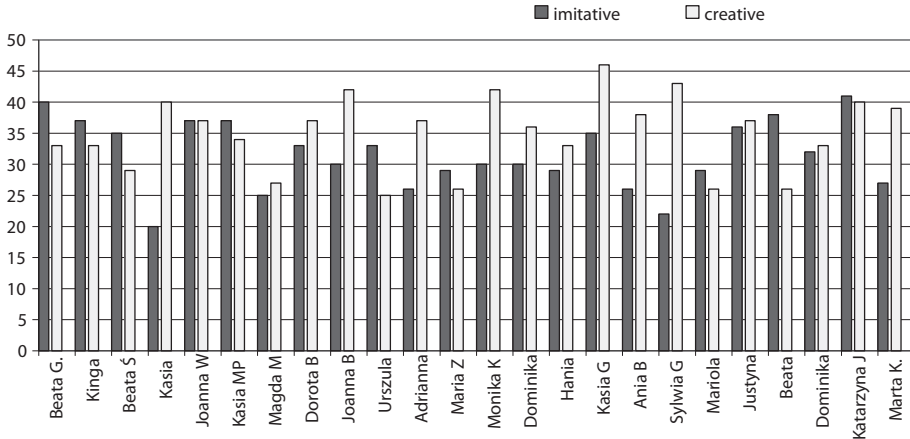
Table 6. Mean of results for scales N, K, A, H in group 1

GROUP 1	N	K	A	H
Mean for group	16	8.1	14.3	15.4
sten	4	5	6	4
level	l	a	a	l

The highest mean in group 1 was found in factor N – non-conformity. Its level is low. Conformity and algorithmic behaviours are average, heuristic behaviours are low.

Group 2. N=24, Private higher education institution, extramural studies, year III

Chart 3. Creative and imitative attitudes – results for group 2, private higher education institution, extramural studies



9 people were found to exhibit a dominance of an imitative attitude. One person shows a balance between these attitudes. 14 people exhibit a dominance of a creative attitude. In group 2, the sum of scales K and A was as follows:

Table 7. Sum of results for scales K and A in group 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
K+A	40	37	35	20	37	37	25	33	30	33	26	29	30	30	29	35	26	22	29	36	38	32	41	27
sten	9	8	7	4	8	8	5	7	6	7	5	6	6	6	6	7	5	4	6	7	8	7	9	5
level	h	h	h	l	h	h	a	h	a	h	a	a	a	a	a	h	a	l	a	h	h	h	h	a

In group 2 it was found that 2 people exhibit an imitative attitude at a low level, 10 – at an average level, 12 – at a high level.

In group 2, the sum of scales N and H was the following:

Table 8. Sum of scales N and H in group 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
N+H	33	33	29	40	37	34	27	37	42	25	37	26	42	36	33	46	38	43	26	37	26	33	40	39
sten	5	5	3	6	6	5	3	6	7	2	6	3	7	5	5	8	6	7	3	6	3	5	6	6
level	a	a	l	a	a	a	l	a	h	l	a	l	h	a	a	h	a	h	l	a	l	a	a	a

In group 2 it was found that 6 people exhibit a creative attitude at a low level, 14 people – at an average level, 4 people – at a high level.

Group 3. N=23, Public higher education institution, University of Silesia, year IV of intramural studies, unified Master’s degree

Chart 4. Results of imitative attitudes, N=25, Public university, year IV of intramural studies

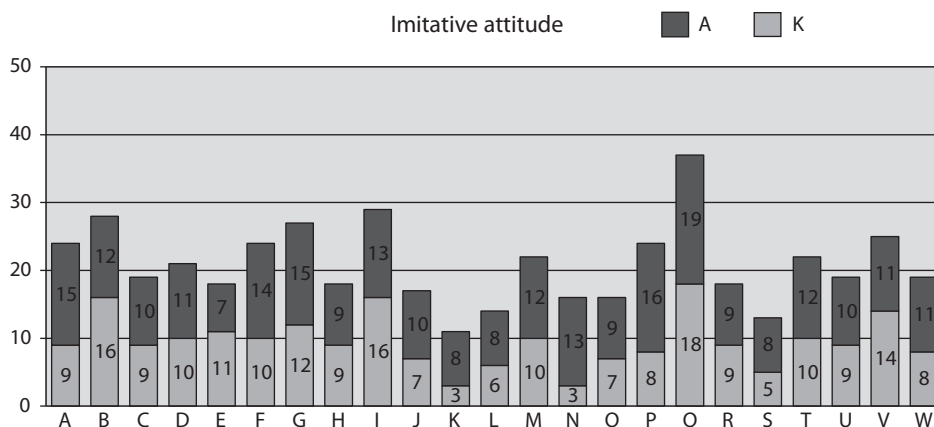


Chart 5. Results of creative attitudes, N=25, Public university, year IV of intramural studies

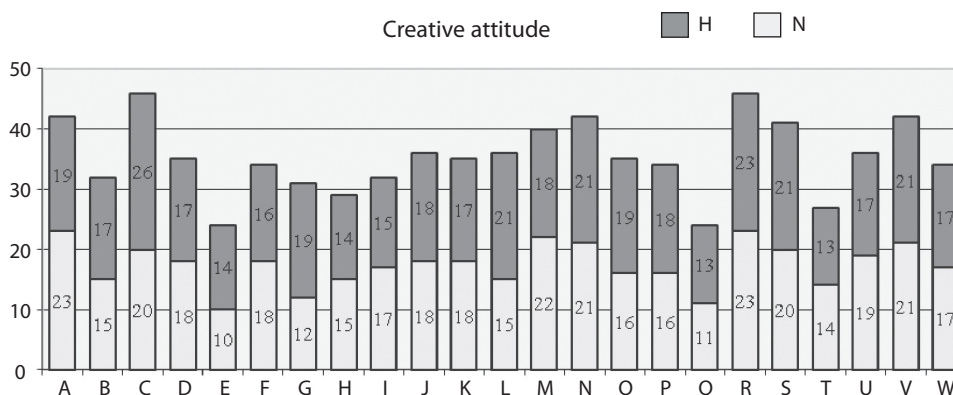


Table 9. Results for group 3, compared to sten norms

Group 3	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
K+A	24	28	19	21	18	24	27	18	29	17	11	14	22	16	16	24	37	18	13	22	19	25	19
sten	5	5	4	4	3	5	5	3	6	3	1	2	4	3	3	5	8	3	1	4	4	5	4
level	a	a	l	l	l	a	a	l	a	l	l	l	l	l	l	a	h	l	l	l	l	a	l
N+H	42	32	46	35	24	34	31	29	32	36	35	36	40	42	35	34	24	46	41	27	36	42	34
sten	7	4	8	5	2	5	4	3	4	5	5	5	6	7	5	5	2	8	7	3	5	7	5
level	h	l	h	a	l	a	l	l	l	a	a	a	a	h	a	a	l	h	h	l	a	h	a

One person exhibited a dominance of an imitative attitude by 13 points (person Q). Balance of attitudes was not exhibited by any person. In general, in group 3 it was found that 15 people exhibit an imitative attitude at a low level, 7 people – at an average level, 1 person – at a high level.

Also, in group 3 it was found that 7 people exhibit a creative attitude at a low level, 10 people – at an average level, 6 people – at a high level.

In group 3 the difference in the results for scales N and K was as follows:

Table 10. Group 3 – difference in the results for scales N and K

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
N-K	14	-1	11	8	-1	8	0	6	1	11	15	9	12	18	9	8	-7	14	15	4	10	7	9
sten	7	3	7	5	3	5	3	5	3	7	8	6	7	9	6	5	1	7	8	4	6	5	6
level	h	l	h	a	l	a	l	a	l	h	h	a	h	h	a	a	l	h	h	l	a	a	a

8 people exhibited a high dominance of non-conformity, 9 people – average, 6 people – low.

In group 3 the difference in the results of scales H and A was as follows:

Table 11. Group 3 – difference in the results for scales H and A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
H-A	4	5	16	6	7	2	4	5	2	8	9	13	6	8	10	2	-6	14	13	1	7	10	6
sten	6	6	10	6	7	5	6	6	5	7	7	9	6	7	7	5	3	9	9	5	7	7	6
level	a	a	h	a	h	a	a	a	a	h	h	h	a	h	h	a	l	h	h	a	h	h	a

11 people exhibited heuristic behaviours at a high level, 11 people – at an average level, 1 person – at a low level.

Table 12. Mean for group 3 in four dimensions of the KANH scale

GROUP 3	N	K	A	H
Mean for group	17.35	9.52	11.39	25.83
sten	4	5	4	10
level	l	a	l	h

In group 3 the highest mean is exhibited in terms of the H factor – heuristic behaviours, which is at a high level. It turned out that non-conformist and algorithmic behaviours were at a low level, while conformity was at an average level.

Group 4. N=16, Public higher education institution, University of Silesia, year V of extramural studies, unified Master's degree

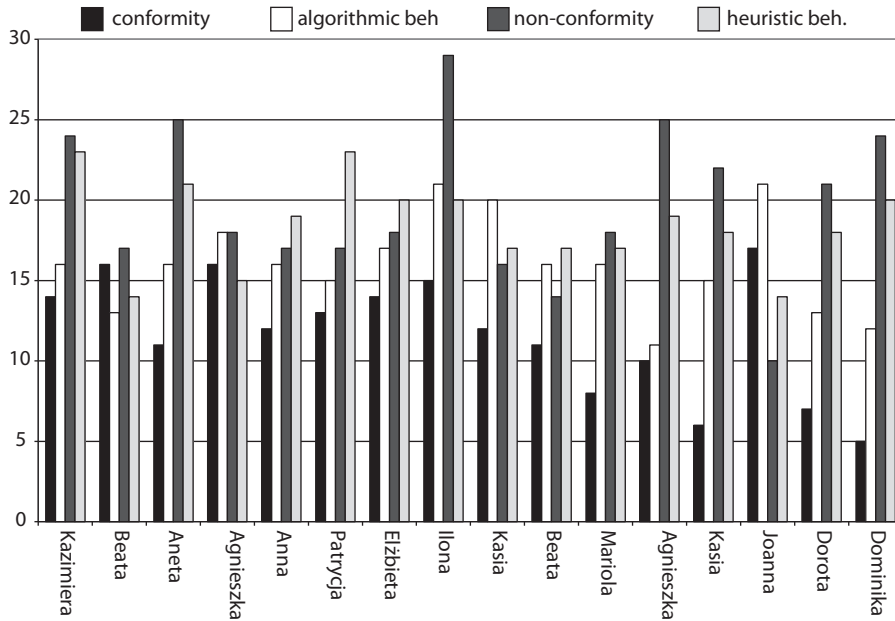
Table 13. Results for group 4, compared to sten norms

Group 4	Kazia	Beata	Aneta	Agnieszka	Anna	Patrycja	Elżbieta	Ilona	Kasia	Beata	Mariola	Agnieszka	Kasia	Joanna	Dorota	Dominika
K	14	16	11	16	12	13	14	15	12	11	8	10	6	17	7	5
A	16	13	16	18	16	15	17	21	20	16	16	11	15	21	13	12
K+A	30	29	27	34	28	28	31	36	32	27	24	21	21	38	20	17
Sten	6	6	5	4	5	5	6	7	7	5	5	4	4	8	4	3
level	a	a	a	l	a	a	a	h	h	a	a	l	l	h	l	l
N	24	17	25	18	17	17	18	29	16	14	18	25	22	10	21	24
H	23	14	21	15	19	23	20	20	17	17	17	19	18	14	18	20
N+H	47	31	46	33	36	40	38	49	33	31	35	44	40	24	39	44
sten	8	4	8	5	5	6	6	9	5	4	5	8	6	2	6	8
level	h	l	h	a	a	a	a	h	a	l	a	h	a	l	a	h

One person (Joanna) was found to exhibit a dominance of an imitative attitude. A high level of an imitative attitude was also determined in two other people (Ilona and Kasia). Ilona also presents a high level of a creative attitude.

In general, group 4 consists of 5 people with a low-level imitative attitude, 8 people with an average-level imitative attitude and 3 people with a high-level imitative attitude. Group 4 was also determined to exhibit 3 low-level creative attitudes, 8 average-level and 5 high-level creative attitudes.

Chart 6. Results for all of the scales of the KANH questionnaire in group 4



Such a breakdown of results makes it possible to specify which scale dominates. Charts with names of participants allow for quick identification of a student that distinguishes themselves in each of the studied scopes. In group 4 the difference in the results for the N and K scales was the following:

Table 14. Group 4 - difference in results for the N and K scales

Group 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
N-K	10	1	14	2	5	4	4	14	4	3	10	15	16	-7	14	19
sten	6	3	7	4	5	4	4	7	4	4	6	8	8	1	7	9
level	a	l	h	l	a	l	l	h	l	l	a	h	h	l	h	h

6 people exhibited a high dominance of non-conformity, 3 people – average, 7 people – low.

In group 4, the difference in the results for the H and A scales was as follows:

Table 15. Group 4 - difference in the results for the H and A scales

Group 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
H-A	7	1	5	3	3	8	3	-1	-3	1	1	8	3	-7	5	8
sten	7	5	6	5	5	7	5	4	3	5	5	7	5	2	6	7
level	h	a	a	a	a	h	a	l	l	a	a	h	a	l	a	h

4 people exhibited a high dominance of heuristic behaviours, 9 people – average, 3 people – low.

Table 16. Mean results for group 4

GROUP 4	N	K	A	H
Mean for group	19.69	11.69	16	18.44
sten	6	6	7	5
level	a	a	h	a

In group 4, the highest mean was determined for non-conformity, which is at an average level. Average conformity and heuristic behaviours, high level of algorithmic behaviours.

Group 5. N=11, Private higher education institution, semester V, extramural, first cycle degree

Chart 7. Results for the imitative attitude in group 5

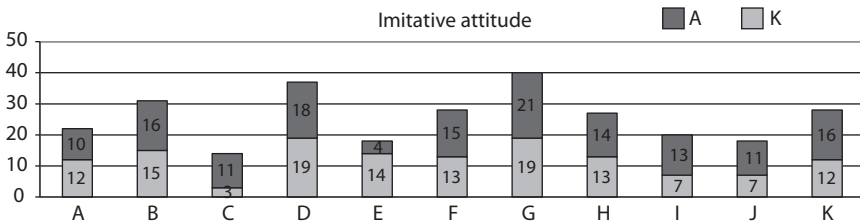
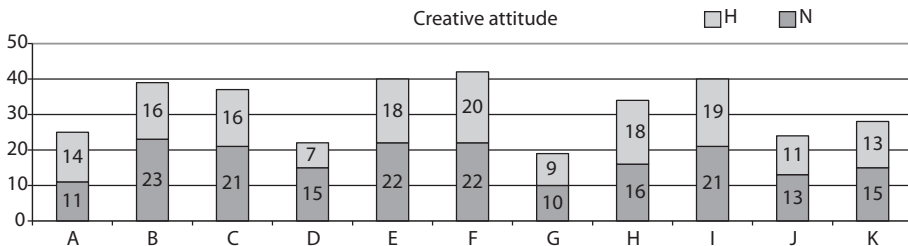


Chart 8. Results for the creative attitude in group 5



Two people exhibited the presence of an imitative attitude. One person exhibited the presence of a balance of attitudes.

Table 17. Results for group 5, compared to sten norms

Group 5	A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.
K+A	22	31	14	37	18	28	40	27	20	18	28
sten	4	6	2	8	3	5	9	5	4	3	5
level	l	a	l	h	l	a	h	a	l	l	a
N+H	25	39	37	22	40	42	19	34	40	24	28
sten	2	6	6	1	6	7	1	5	6	2	3
level	l	a	a	l	a	h	l	a	a	l	l

In group 5 it was found that 5 people exhibit a low level of imitative attitude, 4 people – average level, 2 people – high level.

In terms of creative attitude, 5 people exhibit a low level, 5 people – an average level, 1 person – a high level.

In group 5 the difference in results for the N and K scales was the following:

Table 18. Difference of the N-K scales in group 5

Group 5	1	2	3	4	5	6	7	8	9	10	11
N-K	-1	8	17	-4	8	9	-9	3	14	6	3
sten	3	5	9	2	5	6	1	4	7	5	4
level	l	a	h	l	a	a	l	l	h	a	l

In group 5 a high level of non-conformity dominance was exhibited by 2 people, an average level – by 4 people, while 5 people are characterized by a low dominance of non-conformity.

In group 5 the difference in the results for the H and A scales was as follows:

Table 19. Differences for the H-A scales in group 5

Group 5	1	2	3	4	5	6	7	8	9	10	11
H-A	4	0	5	-11	14	5	-12	4	6	0	-3
sten	6	4	6	1	9	6	1	6	6	4	3
level	a	l	a	l	h	a	l	a	a	l	l

In group 5 only 1 person exhibited a dominance of heuristic behaviours at a high level, 5 people exhibited an average dominance, 5 people – low.

Table 20. Mean results for group 5, for the N, K, A, H scales

GROUP 5	N	K	A	H
Mean for group	17.16	12.18	13.55	14.64
sten	4	6	5	4
level	l	a	a	l

In group 5 the highest mean concerns non-conformity, it is at a low level. Low heuristic behaviours. Average conformity and algorithmic behaviours.

Group 6. N=8, Private higher education institution, extramural, first cycle degree, 5th semester

Chart 9. Results for group 6, private higher education institution, extramural studies, first cycle degree, 5th semester

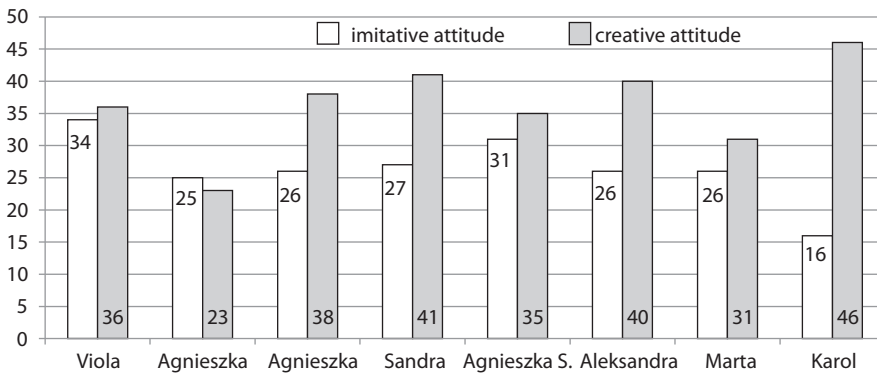


Table 21. Results for group 6, compared to sten norms

Group 6	Viola	Ag-nieszka	Ag-nieszka	Sandra	Ag-nieszka	Alek-sandra	Marta	Karol
K+A	34	25	26	27	31	26	26	16
sten	7	5	5	5	6	5	5	3
level	h	a	a	a	a	a	a	l
N+H	36	23	38	41	35	40	31	46
sten	5	1	6	7	5	6	4	8
level	a	l	a	h	a	a	l	h
dominance of creative attitude	2	-2	12	14	4	14	5	30

Group 6 was found to exhibit 1 imitative attitude at a low level, 6 imitative attitudes at an average level and 1 imitative attitude at a high level. In terms of creative attitudes, group 6 was found to exhibit 2 low level, 4 average level and 2 high level creative attitudes.

Group 7. N=19, Private higher education institution, Career Counseling, extramural, first cycle degree, 5th semester

Chart 10. Results for group 7 – creative and imitative attitudes

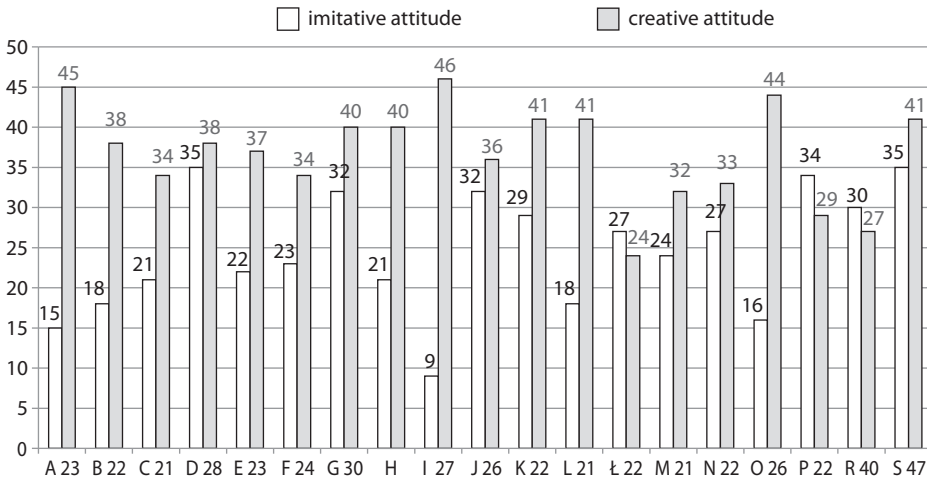


Table 22. Results for group 7, compared to sten norms

SYMBOL, name, age	K	A	K+A	sten	level	N	H	N+H	sten	level	Dominance of creative attitude
A. Kasia 23	7	8	15	2	l	25	20	45	8	h	+30
B. Julia 22	7	11	18	3	l	19	19	38	6	a	+20
C. Marta 21	10	11	21	4	l	17	17	34	5	a	+13
D. Monika 28	17	18	35	7	h	20	18	38	6	a	+3
E. Daria 23	8	14	22	4	l	21	16	37	6	a	+15
F. Dana 24	13	10	23	4	l	19	15	34	5	a	+11
G. Małgorzata 30	14	18	32	7	h	19	21	40	6	a	+8
H. Ania	8	13	21	4	l	21	19	40	6	a	+19
I. Malwina 27	3	6	9	1	l	25	21	46	8	h	+37

SYMBOL, name, age	K	A	K+A	sten	level	N	H	N+H	sten	level	Dominance of creative attitude
J. Aneta 26	14	18	32	7	h	19	17	36	5	a	+4
K. Monika 22	13	16	29	6	a	22	19	41	7	h	+12
L. Joanna 21	6	12	18	3	l	25	16	41	7	h	+23
Ł. Sabina 22	11	16	27	5	a	12	12	24	2	l	-3
M. Monika 21	9	15	24	5	a	18	14	32	4	l	+8
N. Justyna 22	12	15	27	5	a	17	16	33	5	a	+6
O. Łukasz 26	7	9	16	3	l	24	20	44	7	h	+28
P. Adriana 22	20	14	34	7	h	15	14	29	3	l	-5
R. Marcelina 40	16	14	30	6	a	15	12	27	3	l	-3
S. Dorota 47	16	19	35	7	h	19	22	41	7	h	+6

In group 7, it was found that 9 people exhibit an imitative attitude at a low level, 5 people – at an average level, 5 people – at a high level.

Creative attitude is present in group 7 among 4 people at a low level, among 9 people at an average level and among 6 people at a high level.

Table 23. Mean results for all of the KANH scales for group 7

GROUP 7	N	K	A	H
Mean for group	19.58	11.1	13.53	17.26
sten	6	6	5	5
level	a	a	a	a

In group 7 the highest mean was exhibited in terms of non-conformity. It is also an average level compared to Polish national norms. Group 7 achieves an average level also for the scales indicating conformity, algorithmic behaviours and heuristic behaviours.

Group 8. N=6, Private higher education institution, extramural, first cycle degree, 5th semester

Chart 11. Creative and imitative attitudes in group 8, private higher education institution, extramural studies

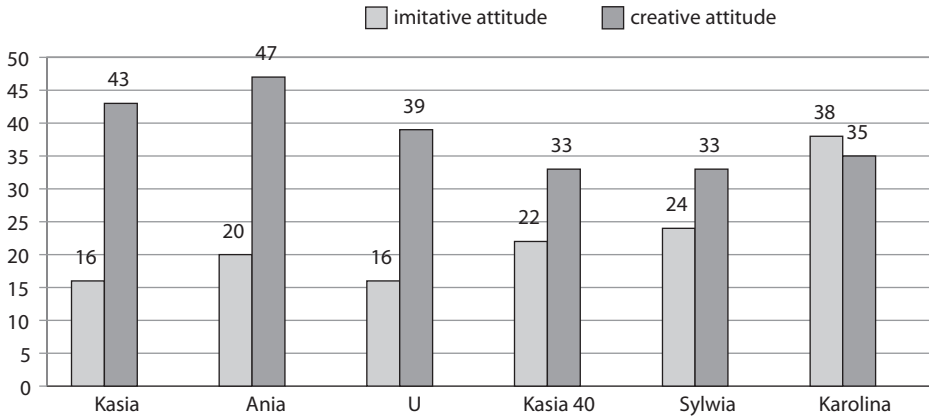


Table 24. Results for group 8, compared to sten norms

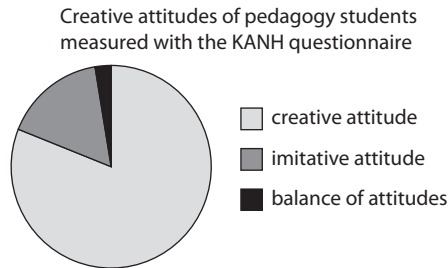
Group 8	Kasia	Ania	U	Kasia 40	Sylwia	Karolina
K+A	16	20	16	22	24	38
sten	3	4	3	4	5	8
level	l	l	l	l	a	h
N+H	43	47	39	33	33	35
sten	7	8	6	5	5	5
level	h	h	a	a	a	a
dominance of creative attitude	27	27	23	11	9	-3

In the small, six-person group 8, one person was found to exhibit a dominance of an imitative attitude.

In group 8, the imitative attitude was found to be exhibited by 4 people at a low level, by 1 person at an average level, by 1 person at a high level. The creative attitude is exhibited by 4 people at an average level and by 2 people at a high level. Nobody exhibits a creative attitude at a low level.

All of the gathered results are presented in the chart below:

Chart 12. Results of measuring creative attitudes in the studied group of 116 people – students of pedagogy



The breakdown of results in terms of creative attitudes is shown in Chart 13. 28 people (24.14%) exhibit a high level of creative attitude, 56 people (48.28%) – an average level, 32 people (27.59%) – exhibit a low level of creative attitude.

Chart 13. Creative attitudes – breakdown of results in the studied group N=116

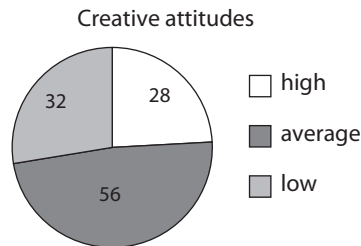
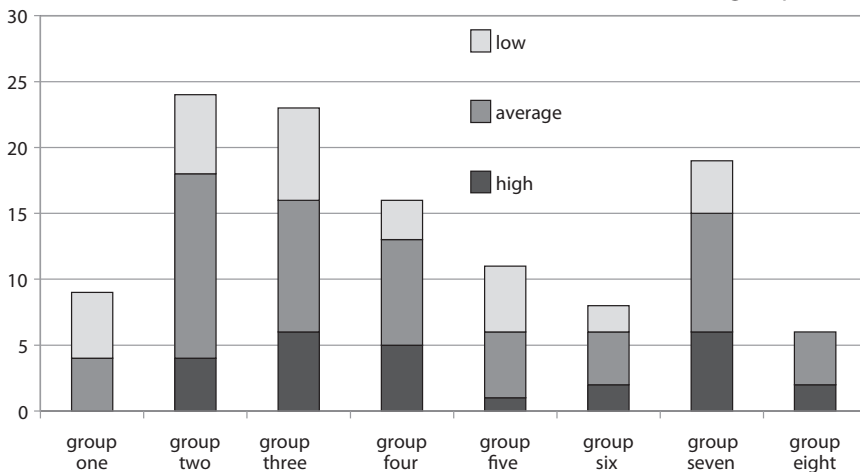


Chart 14. Breakdown of creative attitudes in the studied groups



The breakdown of results in terms of imitative attitudes is shown in Chart 15. 45 people (38.79%) exhibit a low level of imitative attitude, 44 people (37.39%) exhibit an average level, 27 people (23.27%) exhibit a high level.

Chart 15. Imitative attitudes – breakdown of results in the studied group N=116

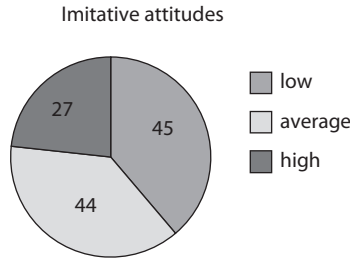
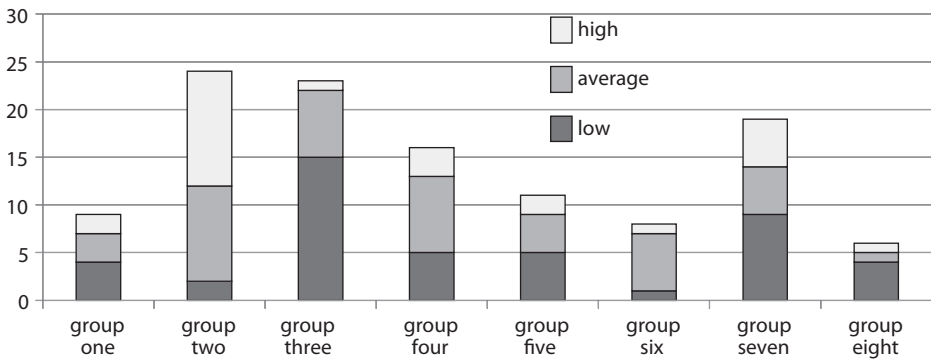


Chart 16. Breakdown of imitative attitudes in the studied groups



Conclusion

Many publications are dedicated to the model of a pedagogue, personality traits that are considered to be indispensable, important when working with children and young people. Getting to know students' personalities, both when it comes to in-service teachers as well as future ones, has been of crucial importance to the author of this paper since the beginning of her professional career. A number of classes (including elective ones) allow the author to measure and evaluate the level of conformity and non-conformity, algorithmic and heuristic behaviours, creative and imitative attitudes among students, not to mention intra-individual and intergroup comparisons. A number of students study for their exams in

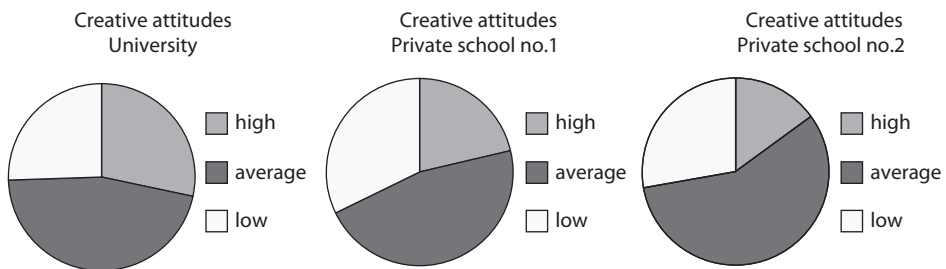
a mechanical way, not understanding what they read. Their knowledge is superficial, derived from the notes of others, not based on an independent study of literature. A candidate with a high level of imitative attitudes will not be applying innovation activities in his or her pedagogical work. In group 1, e.g., there was not even a single person with a high level of creative attitude. A high level of imitative attitude is present in as many as half of group 2.

The data gathered with the use of the KANH Creative Behaviour Questionnaire are especially useful when conducting elective classes during which students create, paint with their fingers, perform many art therapy techniques; they have the opportunity to develop their musical, plastic, motor, and theatrical talents.

The results presented in the text encompass a group of 116 students of pedagogy. Thus, the results should be satisfactory. 94 people (81%) were found to exhibit a dominance of creative attitude over imitative attitude. It was found that only 19 people (16.38%) exhibit a dominance of imitative attitude over creative attitude. 3 people (2.5%) were found to exhibit a balance between the attitudes. The highest rate of high creative attitudes was found among students of Silesian University (28.2%). In private school 1, the rate of high creative attitudes was 21.42%. In private school 2, the same rate was only 18.37%.

Creative attitudes of the students of those three Silesian higher education institutions are presented in a comparative chart below:

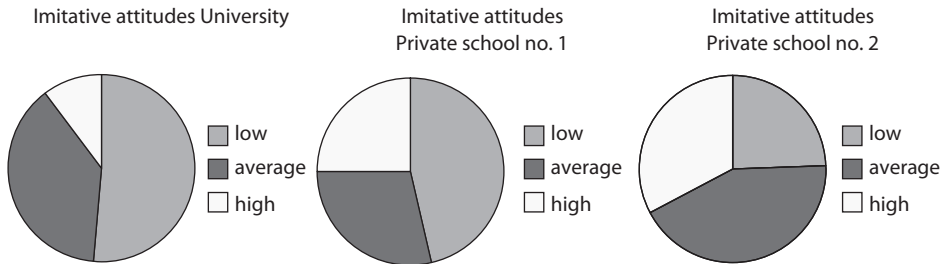
Chart 17. Creative attitudes of students: breakdown according to the type of higher education institution



The lowest rate of high imitative attitudes was found among the students of Silesian University (10.26%). In private high education institution 1, the rate of high imitative attitudes was 25%. In private institution 2, the same rate was 32.65%.

Imitative attitudes of students of those three Silesian institutions are presented in a comparative chart below:

Chart 18. Imitative attitudes of students: breakdown according to the type of higher education institution



The studies performed with the use of the KANH Questionnaire are valuable insofar that they do not lead to ascribing negative labels, as is the case with other tools. Each of the measured scopes, as well as expressions of conformity and algorithmic behaviours turned out to be of use when performing mental and manual activities (Popek, 2004, p. 56). Other findings of studies on pedagogy students can be found in the author's publication concerning the method of finger painting (Szafraniec, 2012).

References

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- Szafraniec, G. (2012). *Malowanie palcami – analiza diagnostyczna*, published by the University of Silesia, Katowice.