

Appendix 1. Evaluation of the combined application of static and dynamic visual variables, sound variables and related methods of presentation for users of different age groups

Number of static visual variables		Number of static and dynamic variables	Dynamized variables	Entities and levels	Combinations of variables	Methods of presentation	Age groups
dynamized variables	other variables						
1	4	10	1 2 3 4	ab	1 (I, II, III, IV, V, VII) 2 3 4; ④⑥⑧⑩	Sab, Kab, Kdab	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	ac	1 (I, II, III, IV, V, VII) 2 3 4; ④⑥⑧⑩	Kc, Sac, Kac (cs), Kdac (cs)	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	βb	1 (I, II, III, IV, V, VII) 2 3 4; ④⑥⑧⑩	Sβb, Kβb, Kdβb, CADm, CADp	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	βc	1 (I, II, III, IV, V, VII) 2 3 4; ④⑥⑧⑩	Ic, Sβc, Kβc (cs), Kdβc (cs), CADm, CADp	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	γb	1 (I, II, III, IV, V, VII) 2 3 4; ④⑥⑧⑩	Kγc(cs), KaBc, KDγb, CAAND, CAANR	[2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	γc	1 (I, II, III, IV, V, VII) 2 3 4; ④⑥⑧⑩	KaBc, Kγc(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	[2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	aa	1 2 (I, II, III, IV, V, VII) 3 4; ⑦⑩⑧⑩	Sac	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	γa	1 2 (I, II, III, IV, V, VII) 3 4; ⑦⑩⑧⑩	MCa, MZa	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	ab	1 2 3 (I, II, III, IV, V, VII) 4; ②③⑥⑧⑩	Sab, Kab, Kdab	[2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	ac	1 2 3 (I, II, III, IV, V, VII) 4; ②③⑥⑧⑩	Kc, Sac, Kac (cs), Kdac (cs)	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	βb	1 2 3 (I, II, III, IV, V, VII) 4; ②③⑥⑧⑩	Sβb, Kβb, Kdβb, CADm, CADp	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	βc	1 2 3 (I, II, III, IV, V, VII) 4; ②③⑥⑧⑩	Ic, Sβc, Kβc (cs), Kdβc (cs), CADm, CADp	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	γb	1 2 3 (I, II, III, IV, V, VII) 4; ②③⑥⑧⑩	Kγc(cs), KaBc, KDγb, CAAND, CAANR	[2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	γc	1 2 3 (I, II, III, IV, V, VII) 4; ②③⑥⑧⑩	KaBc, Kγ c(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	[2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	aa	1 2 3 4 (I, II, III, IV, V, VII); ⑤⑥⑧⑩	Sac	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	βa	1 2 3 4 (I, II, III, IV, V, VII); ⑤⑥⑧⑩	Sβa, MZa	[1] [2] [3] [4] [5] [6] (7)
1	4	10	1 2 3 4	γa	1 2 3 4 (I, II, III, IV, V, VII); ⑤⑥⑧⑩	MCA, MZa	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 5	βa	1 2 3 4 5 (I, II, III, IV, V, VII)	Sβa, MZa	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 5	βb	1 2 3 4 5 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 5	γa	1 2 3 4 5 (I, II, III, IV, V, VII)	MCa, MZa	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 7	aa	1 2 3 4 7 (I, II, III, IV, V, VII)	Sac	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 7	ab	1 2 3 4 7 (I, II, III, IV, V, VII)	Sab, Kab, Kdab	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 7	βa	1 2 3 4 7 (I, II, III, IV, V, VII)	Sβa, MZa	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 7	βb	1 2 3 4 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 8	aa	1 2 3 4 8 (I, II, III, IV, V, VII)	Sac	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 8	ab	1 2 3 4 8 (I, II, III, IV, V, VII)	Sab, Kab, Kdab	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 8	βa	1 2 3 4 8 (I, II, III, IV, V, VII)	Sβa, MZa	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 8	βb	1 2 3 4 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 9	aa	1 2 3 4 9 (I, II, III, IV, V, VII)	Sac	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 9	ab	1 2 3 4 9 (I, II, III, IV, V, VII)	Sab, Kab, Kdab	[1] [2] [3] [4] [5] [6] (7)
1	5	11	1 2 3 4 9	ac	1 2 3 4 9 (I, II, III, IV, V, VII)	Kc, Sac, Kac (cs), Kdac (cs)	[1] [2] [3] [4] [5] [6] (7)
2	5	16	1 2 3 4	ab	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑥⑧⑩	Sab, Kab, Kdab	[1] [2] [3] [4] [5] [6] (7)
2	5	16	1 2 3 4	βb	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑥⑧⑩	Sβb, Kβb, Kdβb, CADm, CADp	[1] [2] [3] [4] [5] [6] (7)

Number of static visual variables		Number of static and dynamic variables	Dynamized variables	Entities and levels	Combinations of variables	Methods of presentation	Age groups
dynamized variables	other variables						
2	5	16	1 2 3 4	βc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑤⑦⑨	Sβc, Kβc (cs), KDBC (CS), CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
2	5	16	1 2 3 4	γb	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑤⑦⑨	Kγc(cs), KaBc, KDγb, CAAND, CAANR	{2} {3} {4} {5} {6} {7}
2	5	16	1 2 3 4	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑤⑦⑨	KaBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{2} {3} {4} {5} {6} {7}
2	5	16	1 2 3 4	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑤⑦⑨	KaBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{2} {3} {4} {5} {6} {7}
2	5	16	1 2 3 4	αa	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑤⑦⑨	Sαc	{1} {2} {3} {4} {5} {6} {7}
2	5	16	1 2 3 4	γa	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4; ④⑥⑧⑩ ②③⑤⑦⑨	MCa, MZa	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 5	βb	1 (I, II, III, IV, V, VII) 2 3 4 5 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 5	γc	1 (I, II, III, IV, V, VII) 2 3 4 5 (I, II, III, IV, V, VII)	KaBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 7	αb	1 (I, II, III, IV, V, VII) 2 3 4 7 (I, II, III, IV, V, VII)	Sαb, Kαb, Kdαb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 7	βb	1 (I, II, III, IV, V, VII) 2 3 4 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 7	γc	1 (I, II, III, IV, V, VII) 2 3 4 7 (I, II, III, IV, V, VII)	KaBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	αb	1 (I, II, III, IV, V, VII) 2 3 4 8 (I, II, III, IV, V, VII)	Sαb, Kαb, Kdαb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	βb	1 (I, II, III, IV, V, VII) 2 3 4 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	γc	1 (I, II, III, IV, V, VII) 2 3 4 8 (I, II, III, IV, V, VII)	KaBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 9	αa	1 (I, II, III, IV, V, VII) 2 3 4 9 (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 9	αc	1 (I, II, III, IV, V, VII) 2 3 4 9 (I, II, III, IV, V, VII)	Kc, Sαc, Kαc (cs), Kdαc (cs)	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 9	γc	1 (I, II, III, IV, V, VII) 2 3 4 9 (I, II, III, IV, V, VII)	KaBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 5	γa	1 2 (I, II, III, IV, V, VII) 3 4 5 (I, II, III, IV, V, VII)	MCA, MZa	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 7	αa	1 2 (I, II, III, IV, V, VII) 3 4 7 (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	αa	1 2 (I, II, III, IV, V, VII) 3 4 8 (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 9	αa	1 2 (I, II, III, IV, V, VII) 3 4 9 (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 5	βb	1 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 7	αb	1 2 3 (I, II, III, IV, V, VII) 4 7 (I, II, III, IV, V, VII)	Sαb, Kαb, Kdαb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 7	βb	1 2 3 (I, II, III, IV, V, VII) 4 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	αa	1 2 3 (I, II, III, IV, V, VII) 4 8 (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	αb	1 2 3 (I, II, III, IV, V, VII) 4 8 (I, II, III, IV, V, VII)	Sαb, Kαb, Kdαb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	βb	1 2 3 (I, II, III, IV, V, VII) 4 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 9	αa	1 2 3 (I, II, III, IV, V, VII) 4 9 (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 9	αc	1 2 3 (I, II, III, IV, V, VII) 4 9 (I, II, III, IV, V, VII)	Kc, Sαc, Kαc (cs), Kdαc (cs)	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 5	βa	1 2 3 4 (I, II, III, IV, V, VII) 5 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 5	γa	1 2 3 4 (I, II, III, IV, V, VII) 5 (I, II, III, IV, V, VII)	MCa	{1} {2} {3} {4} {5} {6} {7}

Number of static visual variables		Number of static and dynamic variables	Dynamized variables	Entities and levels	Combinations of variables	Methods of presentation	Age groups
dynamized variables	other variables						
2	5	17	1 2 3 4 7	aa	1 2 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 7	βa	1 2 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	aa	1 2 3 4 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 8	βa	1 2 3 4 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
2	5	17	1 2 3 4 9	aa	1 2 3 4 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 5 7	βa	1 2 3 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 5 7	βb	1 2 3 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 5 8	βa	1 2 3 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 5 8	βb	1 2 3 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 7 8	aa	1 2 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 7 8	βa	1 2 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 7 8	βb	1 2 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 7 9	ab	1 2 3 4 7 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sab, Kab, Kdab	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 8 9	aa	1 2 3 4 8 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
2	6	18	1 2 3 4 8 9	ab	1 2 3 4 8 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sab, Kab, Kdab	{1} {2} {3} {4} {5} {6} {7}
3	4	22	1 2 3 4	βc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 (I, II, III, IV, V, VII); ④⑥⑧⑩ ②③⑥⑧⑩ ⑤⑥⑧⑩	Ic, Sβc, Kβc (cs), Kdβc (cs), CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 5	βb	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 5	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII)	KaBc, KyC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 7	βb	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 7	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 7 (I, II, III, IV, V, VII)	KaBc, KyC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 8	ab	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 8 (I, II, III, IV, V, VII)	Sab, Kab, Kdab	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 8	βb	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 8	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 8 (I, II, III, IV, V, VII)	KaBc, KyC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 9	ab	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 9	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 9 (I, II, III, IV, V, VII)	KaBc, KyC(cs), KDγC(cs), CAAND, CAANR	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 9	ac	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 9 (I, II, III, IV, V, VII)	Kc, Sac, Kac (cs), Kdac (cs)	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 9	ab	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 9	ac	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 9 (I, II, III, IV, V, VII)	Kc, Sac, Kac (cs), Kdac (cs)	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 5	βb	1 (I, II, III, IV, V, VII) 2 3 4 (I, II, III, IV, V, VII) 5 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 5	γc	1 (I, II, III, IV, V, VII) 2 3 4 (I, II, III, IV, V, VII) 5 (I, II, III, IV, V, VII)	KaBc, KyC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 7	βb	1 (I, II, III, IV, V, VII) 2 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 7	γc	1 (I, II, III, IV, V, VII) 2 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	KaBc, KyC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}

Number of static visual variables		Number of static and dynamic variables	Dynamized variables	Entities and levels	Combinations of variables	Methods of presentation	Age groups
dynamized variables	other variables						
3	5	23	1 2 3 4 5	γa	1 2 (I, II, III, IV, V, VII) 3 4 (I, II, III, IV, V, VII) 5 (I, II, III, IV, V, VII)	MCa, MZa	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 7	αa	1 2 (I, II, III, IV, V, VII) 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 8	αa	1 2 (I, II, III, IV, V, VII) 3 4 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	5	23	1 2 3 4 9	αa	1 2 (I, II, III, IV, V, VII) 3 4 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 8	βb	1 (I, II, III, IV, V, VII) 2 3 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 8	γc	1 (I, II, III, IV, V, VII) 2 3 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	KαBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 8	αa	1 (I, II, III, IV, V, VII) 2 3 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 8	βa	1 (I, II, III, IV, V, VII) 2 3 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 8	βb	1 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 8	βa	1 2 3 4 (I, II, III, IV, V, VII) 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	SβA, MZa	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 7	βb	1 (I, II, III, IV, V, VII) 2 3 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 7	βa	1 2 (I, II, III, IV, V, VII) 3 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	SβA, MZa	{1} {2} {3} {4} {5} {6} {7}
3	6	4	1 2 3 4 5 7	βb	1 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 5 7	βa	1 2 3 4 (I, II, III, IV, V, VII) 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	αb	1 (I, II, III, IV, V, VII) 2 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sαb, Kab, Kdαb	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	βb	1 (I, II, III, IV, V, VII) 2 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 9	αb	1 (I, II, III, IV, V, VII) 2 3 4 7 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sαb, Kab, Kdαb	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	αa	1 2 (I, II, III, IV, V, VII) 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	βa	1 2 (I, II, III, IV, V, VII) 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 9	αa	1 2 (I, II, III, IV, V, VII) 3 4 7 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	αb	1 2 3 (I, II, III, IV, V, VII) 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sαb, Kab, Kdαb	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	βb	1 2 3 (I, II, III, IV, V, VII) 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 9	αb	1 2 3 (I, II, III, IV, V, VII) 4 7 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sαb, Kab, Kdαb	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 8 9	αa	1 2 3 4 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 8 9	αc	1 2 3 4 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Kc, Sac, Kac (cs), Kdac (cs)	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	αa	1 2 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 8	βa	1 2 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
3	6	24	1 2 3 4 7 9	αa	1 2 3 4 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
3	7	25	1 2 3 4 5 7 8	βa	1 2 3 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
3	7	25	1 2 3 4 5 7 8	βb	1 2 3 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
3	7	25	1 2 3 4 7 8 9	αa	1 2 3 4 7 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII) 9 (I, II, III, IV, V, VII)	Sac	{1} {2} {3} {4} {5} {6} {7}
4	6	30	1 2 3 4 5 7	βb	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
4	6	30	1 2 3 4 5 7	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII) 7 (I, II, III, IV, V, VII)	KαBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
4	6	30	1 2 3 4 5 8	βb	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
4	6	30	1 2 3 4 5 8	γc	1 (I, II, III, IV, V, VII) 2 3 (I, II, III, IV, V, VII) 4 5 (I, II, III, IV, V, VII) 8 (I, II, III, IV, V, VII)	KαBc, KγC(cs), KDγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}

Number of static visual variables		Number of static and dynamic variables	Dynamized variables	Entities and levels	Combinations of variables	Methods of presentation	Age groups
dynamized variables	other variables						
						CAACIR, CAAND, CAANR, CAANE	
4	6	30	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u>	αb	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sαb, Kαb, Kdαb	{1} {2} {3} {4} {5} {6} {7}
4	6	30	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u>	βb	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
4	6	30	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u>	γc	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	KαBc, KγC(cs), KΔγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
4	6	30	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u>	αa	<u>1</u> <u>2</u> (I, II, III, IV, V, VII) <u>3</u> <u>4</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
4	7	31	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u>	βb	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> <u>4</u> <u>5</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
4	7	31	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u>	γc	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> <u>4</u> <u>5</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	KαBc, KγC(cs), KΔγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
4	7	31	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u>	βb	<u>1</u> <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>5</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb	{1} {2} {3} {4} {5} {6} {7}
4	7	31	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u>	βa	<u>1</u> <u>2</u> <u>3</u> <u>4</u> (I, II, III, IV, V, VII) <u>5</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}
5	7	37	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u>	βb	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>5</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sβb, Kβb, Kdβb, CADm, CADp	{1} {2} {3} {4} {5} {6} {7}
5	7	37	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u>	γc	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>5</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	KαBc, KγC(cs), KΔγC(cs), CAACDr, CAACDs, CAACDd, CAACR, CAACIR, CAAND, CAANR, CAANE	{1} {2} {3} {4} {5} {6} {7}
5	7	37	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u> <u>9</u>	αb	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII) <u>9</u> (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
5	7	37	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u> <u>9</u>	αb	<u>1</u> (I, II, III, IV, V, VII) <u>2</u> <u>3</u> (I, II, III, IV, V, VII) <u>4</u> <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII) <u>9</u> (I, II, III, IV, V, VII)	Sαc	{1} {2} {3} {4} {5} {6} {7}
5	7	37	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u>	βa	<u>1</u> <u>2</u> (I, II, III, IV, V, VII) <u>3</u> <u>4</u> (I, II, III, IV, V, VII) <u>5</u> (I, II, III, IV, V, VII) <u>7</u> (I, II, III, IV, V, VII) <u>8</u> (I, II, III, IV, V, VII)	Sβa, MZa	{1} {2} {3} {4} {5} {6} {7}

Key:

Static visual variables

1 size; 2 form; 3 value; 4 colour; 5 grain; 6 orientation; 7 brilliance; 8 transparency; 9 aura; dynamized variables are underlined

Sound variables

② Pitch; ③ Register; ④ Loudness; ⑤ Timbre; ⑥ Duration; ⑦ Rhythm; ⑧ Rate of change; ⑨ Order; ⑩ Frequency

Entities / measurement levels

α point entities; β line entities; γ area entities;

a - nominal scale measurable entities; b - ordinary scale measurable entities; c - quantitative scale measurable entities

Methods of presentations

S _{ab} – Ordinary point signatures,	S _{βc} – Quantitative line signatures,	CAACDr – Rectangular anamorphic cartodiagram
K _{ab} – Ordinary point choropleth maps,	K _{βc} (cs) - Quantitative line choropleth maps,	CADp – Polycentric distance cartograms
K _{dab} – Ordinary point cartodiagrams	K _{dβc} (cs) - Quantitative line cartodiagrams	CAACDs – Square anamorphic cartodiagrams
K _c – Dot method,	K _{αBb} – Ordinary Bertin's choropleth map,	CAACDd – Dorling cartograms
S _{ac} – Quantitative point signatures,	K _{γb} – Ordinary area choropleth maps,	CAACR – Contiguous regular (mosaic) cartograms
K _{ac} (cs) – Quantitative point choropleth maps,	KD _{γb} – Ordinary dasimetric choropleth maps,	CAACIR – Contiguous irregular cartograms
K _{dac} (cs) - Quantitative point cartodiagrams,	K _{αBc} - Quantitative Bertin's choropleth map,	CAAND – Noncontiguous diagram cartograms
S _{βb} – Ordinary line signatures,	K _{γc} (cs) - Quantitative area choropleth maps,	CAANR – Noncontiguous regular cartograms
K _{βb} – Ordinary line choropleth maps,	KD _{γc} (cs) - Quantitative dasimetric choropleth maps,	CAANE – Noncontiguous equiform cartograms
K _{dβb} - Ordinary line cartodiagrams	S _{aa} – Qualitative point signatures	CADm – Monocentric distance cartograms
I _c – isoline maps,	M _{Ca} – Chorochromatic method maps,	CADp – Polycentric distance cartograms
S _{βa} – Qualitative line signatures,	M _{Za} – Range maps	

The methods distinguished by italics are conditional for seventh age group

Age groups

[1] [2] [3] [4] [5] [6] [7] - correct combination of variables for labelled age groups

{1} {2} {3} {4} {5} {6} {7} {8} conditional combination of variables for labelled age groups

Correct
combination

Combination
inaccessible
due to the
absence of *colour*

Combination
inaccessible
due to the
absence of *aura*

Combination
inaccessible
due to the absence
of *colour* and *aura*