

Electronic Supplementary Material

for the manuscript

Guided Tours in Photography Exhibitions as a Museum Education Format: Use, Perceived Effects, and Visitor Types

This supplement documents the item pool, the final scale construction, additional group comparisons, and supplementary information on the cluster analysis. For guided-tour analyses, $n = 345$ participants were included who reported attending guided tours in exhibitions of artistic photography at least rarely. Group comparisons between professionals and amateurs are based on $n = 324$ cases; the “neither” group was excluded from these comparisons.

Table S1

Use of Guided Tours, Domain-Specific Importance, and Expectation Similarity

Domain	Category/Statistic	n	%	M	SD
Participation in Guided Tours in Art Exhibitions in General	never	84	18.2		
Participation in Guided Tours in Art Exhibitions in General	rarely	150	32.5		
Participation in Guided Tours in Art Exhibitions in General	occasionally	169	36.7		
Participation in Guided Tours in Art Exhibitions in General	frequently	50	10.8		
Participation in Guided Tours in Art Exhibitions in General	always	8	1.7		
Participation in Guided Tours in Photography Exhibitions	never	116	25.2		
Participation in Guided Tours in Photography Exhibitions	rarely	140	30.4		
Participation in Guided Tours in Photography Exhibitions	occasionally	144	31.2		
Participation in Guided Tours in Photography Exhibitions	frequently	49	10.6		
Participation in Guided Tours in Photography Exhibitions	always	12	2.6		
Perceived Importance of Guided Tours by Domain	Painting			2.77	1.23
Perceived Importance of Guided Tours by Domain	Sculpture			2.47	1.17
Perceived Importance of Guided Tours by Domain	Artistic Photography			2.94	1.19
Expectations Toward Guided Tours in Photography Exhibitions	Expectations correspond to those in painting/sculpture	277	80.3		
Expectations Toward Guided Tours in Photography Exhibitions	Different expectations than in painting/sculpture	68	19.7		

Note. Participation frequencies and domain-specific importance ratings are reported for the total sample ($N = 461$). The comparison of expectations toward guided tours in photography exhibitions versus painting/sculpture is based on the subsample of participants who reported

attending guided tours in exhibitions of artistic photography at least rarely ($n = 345$). Higher mean values indicate greater perceived importance.

Table S2

Guided-Tour Items and Their Assignment to the Final Factor Solution

Domain	Item	Status in Final Solution
Requirements	Special stories about the artworks	Informational Gain
Requirements	Learn more about the personality of the photographer/artist	Informational Gain
Requirements	Learn more about the background of the artworks/photographs	Informational Gain
Effects	Better access to the photographs	Excluded
Negative aspects	Not be influenced by a guided tour	Rejection
Requirements	Connect with other people interested in art	Excluded
Requirements	Be able to ask the guide questions directly	Excluded
Negative aspects	Guided tours last too long	Rejection
Effects	Better memory for individual photographs	Positive Effects
Requirements	Learn more about artistic techniques	Informational Gain
Negative aspects	The presence of other participants is distracting	Rejection
Requirements	Guided tours as part of an overall experience	Excluded
Requirements	Learn more about the selection of works	Excluded
Negative aspects	Information overload	Rejection
Negative aspects	Guided tours are too didactic	Rejection
Effects	I like photographs more after explanations	Positive Effects
Negative aspects	Experience photographic art without others' interpretations	Rejection
Negative aspects	Guided tours are boring	Rejection
Negative aspects	Guided tours are scheduled at inconvenient times	Excluded
Effects	Better memory for exhibitions	Positive Effects
Effects	Photographs are perceived as more artistic	Positive Effects

Note. The table is based on the original set of 21 guided-tour items. “Excluded” denotes items that did not contribute sufficiently to the final three-factor structure in psychometric or substantive terms and were therefore omitted from the final solution.

Table S3a

Additional Item Statistics for Guided-Tour Requirements and Group Comparisons Between Professionals and Amateurs

Item	M total	SD	M professionals	M amateurs	t	p	d
Special stories about the artworks	3.92	0.93	3.96	3.87	0.86	.388	0.10
Learn more about the personality of the photographer/artist	3.95	0.94	4.12	3.79	3.19	.002	0.35
Learn more about the background of the artworks/photographs	4.22	0.81	4.28	4.20	0.91	.361	0.10
Connect with other people interested in art	2.45	1.07	2.37	2.58	-1.74	.083	-0.19
Be able to ask the guide questions directly	3.10	1.15	2.97	3.27	-2.32	.021	-0.26
Learn more about artistic techniques	3.51	1.12	3.36	3.72	-2.92	.004	-0.32
Guided tours as part of an overall experience	2.91	1.13	2.75	3.04	-2.38	.018	-0.26
Learn more about the selection of works	3.18	1.11	3.13	3.22	-0.71	.478	-0.08

Note. Only participants who reported attending guided tours in exhibitions of artistic photography at least rarely were included (N = 345). Group comparisons refer to professionals (n = 166) and amateurs (n = 158); cases in the “neither” group were excluded. d = Cohen’s d, calculated as professionals minus amateurs. Higher values indicate stronger agreement.

Table S3b

Additional Item Statistics for Negative Aspects of Guided Tours and Group Comparisons Between Professionals and Amateurs

Item	M total	SD	M professionals	M amateurs	t	p	d
Not be influenced by a guided tour	2.08	1.07	2.07	2.09	-0.14	.892	-0.02
Guided tours last too long	2.38	1.07	2.31	2.44	-1.10	.273	-0.12
The presence of other participants is distracting	1.92	1.01	1.81	1.99	-1.60	.110	-0.18
Information overload	2.27	0.99	2.11	2.46	-3.17	.002	-0.35
Guided tours are too didactic	2.07	1.03	1.99	2.16	-1.48	.140	-0.16
Experience photographic art without others’ interpretations	2.16	1.09	2.19	2.14	0.44	.663	0.05
Guided tours are boring	2.22	1.08	2.20	2.23	-0.30	.764	-0.03

Item	M total	SD	M professionals	M amateurs	t	p	d
Guided tours are scheduled at inconvenient times	2.83	1.15	2.71	2.94	-1.76	.079	-0.20

Note. Only participants who reported attending guided tours in exhibitions of artistic photography at least rarely were included (N = 345). Group comparisons refer to professionals (n = 166) and amateurs (n = 158); cases in the “neither” group were excluded. d = Cohen’s d, calculated as professionals minus amateurs. Higher values indicate stronger agreement.

Table S3c

Additional Item Statistics for Perceived Effects of Guided Tours and Group Comparisons Between Professionals and Amateurs

Item	M total	SD	M professionals	M amateurs	t	p	d
Better access to the photographs	3.85	0.99	3.81	3.92	-1.05	.293	-0.12
Better memory for individual photographs	3.23	1.18	3.05	3.40	-2.70	.007	-0.30
I like photographs more after explanations	2.82	1.06	2.64	2.98	-2.92	.004	-0.32
Better memory for exhibitions	3.30	1.20	2.98	3.63	-5.02	< .001	-0.56
Photographs are perceived as more artistic	2.86	1.17	2.51	3.19	-5.48	< .001	-0.61

Note. Only participants who reported attending guided tours in exhibitions of artistic photography at least rarely were included (N = 345). Group comparisons refer to professionals (n = 166) and amateurs (n = 158); cases in the “neither” group were excluded. d = Cohen’s d, calculated as professionals minus amateurs. Higher values indicate stronger agreement.

Table S4

Rotated Component Matrix of the Final Three-Factor Solution

Item	Rejection	Positive Effects	Informational Gain	h ²	Scale Assignment
Experience photographic art without others’ interpretations	0.63	-0.19	-0.17	0.46	Rejection
Guided tours last too long	0.80	0.01	-0.02	0.64	Rejection
Guided tours are boring	0.76	-0.17	-0.10	0.61	Rejection
Guided tours are too didactic	0.74	-0.04	-0.04	0.56	Rejection
Information overload	0.74	0.13	-0.02	0.56	Rejection
Not be influenced by a guided tour	0.63	-0.15	-0.15	0.44	Rejection

Item	Rejection	Positive Effects	Informational Gain	h ²	Scale Assignment
The presence of other participants is distracting	0.62	0.07	-0.06	0.39	Rejection
Better memory for exhibitions	-0.20	0.81	0.20	0.73	Positive Effects
Better memory for individual photographs	-0.01	0.77	0.20	0.63	Positive Effects
I like photographs more after explanations	0.03	0.81	0.06	0.66	Positive Effects
Photographs are perceived as more artistic	-0.00	0.84	0.09	0.72	Positive Effects
Special stories about the artworks	0.00	0.18	0.76	0.61	Informational Gain
Learn more about the background of the artworks/photographs	-0.16	0.21	0.79	0.70	Informational Gain
Learn more about the personality of the photographer/artist	-0.09	0.07	0.84	0.71	Informational Gain
Learn more about artistic techniques	0.10	0.39	0.45	0.36	Informational Gain

Note. Extraction method: principal component analysis. Rotation: varimax with Kaiser normalization. N = 345. KMO = .827. The final three-factor solution explained 58.45% of the total variance. Factor 1 = Rejection of Guided Tours, Factor 2 = Positive Effects of Guided Tours, Factor 3 = Informational Gain From Guided Tours. h² = communality.

Table S5

Scale Construction and Internal Consistencies of the Final Guided-Tour Scales

Scale	k	Included Items	Cronbach's α	Explained Variance
Rejection of Guided Tours	7	Not be influenced; too long; distracting participants; information overload; too didactic; without others' interpretations; boring	0.84	24.13%
Positive Effects of Guided Tours	4	Better memory for individual photographs; better memory for exhibitions; photographs liked better; photographs perceived as more artistic	0.84	19.23%
Informational Gain From Guided Tours	4	Special stories; personality; background; artistic techniques	0.72	15.09%

Note. The percentages reported in the table refer to the variance explained by each component in the final three-factor solution. Cronbach's alpha coefficients were calculated on the basis of the final scales.

Table S6

Profiling of the Three Clusters on the Variables Included in the Cluster Analysis

Characteristic	Cluster 1	Cluster 2	Cluster 3	F(2, 342)	p	η^2
Rejection of Guided Tours	1.90	2.50	2.11	19.56	< .001	0.10
Positive Effects of Guided Tours	3.60	2.77	2.83	30.56	< .001	0.15
Informational Gain From Guided Tours	4.08	3.62	3.97	13.06	< .001	0.07
Knowledge about artistic photography	2.28	1.81	3.87	288.03	< .001	0.63
Interest in artistic photography	4.53	3.50	4.81	116.24	< .001	0.40
Engagement with artistic photography	3.12	2.21	4.66	379.78	< .001	0.69
Attendance of guided tours in photography exhibitions	3.04	2.15	3.11	65.49	< .001	0.28
Perceived importance of guided tours in artistic photography	3.79	2.45	3.57	78.71	< .001	0.32

Note. The table is based on a k-means cluster analysis including three guided-tour scales, the scale knowledge about artistic photography, and four additional single variables. N = 345. F values stem from one-way analyses of variance used to profile the clusters. Higher values indicate stronger endorsement or higher levels of the respective characteristic.

Table S7

Composition of the Clusters by Photographer Status

Photographer Status	Cluster 1 n (%)	Cluster 2 n (%)	Cluster 3 n (%)
Professionals	44 (40.4)	39 (38.6)	83 (61.5)
Amateurs	59 (54.1)	49 (48.5)	50 (37.0)
Neither	6 (5.5)	13 (12.9)	2 (1.5)

Note. Percentages refer to the respective cluster size. Cluster 1 = Curious Art Explorers; Cluster 2 = Reserved Art Skeptics; Cluster 3 = Reflective Art Experts.

Table S8

Preferences for Formats, Duration, and Alternative Information Offers

Domain	Category/Statistic	n	%	M	SD
Optimal Duration of a Guided Tour	M (SD)			46.44	18.42
Optimal Duration of a Guided Tour	60 minutes	117	34.4		
Optimal Duration of a Guided Tour	45 minutes	75	22.1		
Optimal Duration of a Guided Tour	30 minutes	72	21.2		

Maximum Acceptable Duration	M (SD)			72.54	28.56
Maximum Acceptable Duration	60 minutes	110	32.4		
Maximum Acceptable Duration	90 minutes	98	28.9		
Free Audio Guide	M (SD)			2.62	1.21
Free Audio Guide	never	102	22.1		
Free Audio Guide	always	33	7.2		
Paid Audio Guide	M (SD)			1.96	1.03
Paid Audio Guide	never	199	43.2		
Paid Audio Guide	frequently or always	38	8.2		
Direct Preference	Group Tour	222	48.2		
Direct Preference	Audio Guide	128	27.8		
Direct Preference	Neither	111	24.1		
If No Group Tour Is Offered	Brochure/Written Information	230	49.9		
If No Group Tour Is Offered	Audio Guide	191	41.4		
If No Group Tour Is Offered	Neither	40	8.7		

Note. Percentages refer to the total sample (N = 461). Mean values for optimal duration and maximum acceptable duration are based on valid responses to the respective duration questions (optimal duration: n = 340; maximum acceptable duration: n = 339). Free and paid audio guides were rated on 5-point scales, with higher values indicating greater reported use or acceptance of the respective format.