Appendix 4 Results of multiple regression analysis

Q1-1. The policies talked about in the discussion will lead to the realization of a low-carbon society in Suita City that conserves limited energy resources.

	Session 1 (n=23)		Session 2 (n=22)		Session 3 (n=20)		Session 4 (n=18)	
	β		β		β		β	
Critical Thinking			0.59	*	0.40	†		
Generativity			-0.72	**	-0.87	***		
Scientific Literacy	0.35	†						
SVO (0:proself, 1: prosocial)	-0.37	*						
Gender (0: M, 1: F)								
Age	-0.58	**						
Occupation 1) Housewife/househusband							-0.46	*
Occupation 2) Part-time/casual work	-0.38	*						
Occupation 3) Employee (e.g., company employee)			-0.46	*			0.46	*
Occupation 4) Self-employed or family employee								
Occupation 5) Retired/pensioner	0.43	†						
Occupation 6) Student								
Occupation 7) Others					0.32	†		
Household size (no. of members)			0.43	*				
No. of years in same residence								
Residence type 1) Detached house (owner)								
Residence type 2) Detached house (renter)								
Residence type 3) Apartment (owner)								
Residence type 4) Apartment (renter)								
Residence type 5) Other								
Household income					0.50	*		

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-2. The policies talked about in the discussion will lead to the formation of a social system that will manage Suita City's resources.

	Session 1 (n=23) β		Session 2 (n=22) β		Session 3 (n=19) β		Session 4 (n=18) β	
Critical Thinking					-0.18	*	0.21	*
Generativity								
Scientific Literacy					0.66	***		
SVO (0:proself, 1: prosocial)			-0.43	*	-0.38	***	0.14	n.s.
Gender (0: M, 1: F)					-0.21	*	-0.48	***
Age								
Occupation 1) Housewife/househusband							-0.42	***
Occupation 2) Part-time/casual work								
Occupation 3) Employee (e.g., company employee)					1.10	***	0.62	***
Occupation 4) Self-employed or family employee								
Occupation 5) Retired/pensioner	0.46	*	0.33	n.s.				
Occupation 6) Student								
Occupation 7) Others								
Household size (no. of members)			0.38	†	-0.51	***		
No. of years in same residence	-0.80	***						
Residence type 1) Detached house (owner)							-0.44	***
Residence type 2) Detached house (renter)								
Residence type 3) Apartment (owner)								
Residence type 4) Apartment (renter)			0.47	*				
Residence type 5) Other								
Household income								

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-3. The policies talked about in the discussion will help "foster" environmental awareness among Suita's citizens.

	Session 1 (n=23) β	Session 2 (n=22) β	Session 3 (n=19) β	Session 4 (n=18) β
Critical Thinking				
Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)				
Gender (0: M, 1: F)				
Age	-0.32 †			
Occupation 1) Housewife/househusband		-0.36 †	-0.52 **	-0.60 **
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)				0.51 **
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner				-0.62 **
Occupation 6) Student				
Occupation 7) Others	-0.66 ***			
Household size (no. of members)				
No. of years in same residence				
Residence type 1) Detached house (owner)				
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)			0.49 *	
Residence type 4) Apartment (renter)		0.41 *		
Residence type 5) Other				
Household income			0.39 *	-0.64 **

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-4. Failure to implement the policies talked about in the discussion will lead to a serious crisis.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)
	β	β	β	β
Critical Thinking	0.35 †		-0.47 *	
Generativity			0.66 **	
Scientific Literacy				
SVO (0:proself, 1: prosocial)				
Gender (0: M, 1: F)		-0.50 *		
Age				
Occupation 1) Housewife/househusband			-0.88 ***	
Occupation 2) Part-time/casual work			-0.25 †	-0.65 **
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)			-0.50 *	
No. of years in same residence				
Residence type 1) Detached house (owner)			-0.40 *	-0.66 **
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income			0.36 *	0.47 **

Note. *** *p*<.001, ***p*<.01, *p*<.05, †*p*<.10. β is a coefficient value in regression analysis.

Q1-5. The matters discussed here must not be left to future generations.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)
	β	β	β	β
Critical Thinking	0.61 **			
Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)		0.41 *		
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband		-0.44 *	-0.80 ***	
Occupation 2) Part-time/casual work		-0.29 n.s.	-0.27 †	
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				
No. of years in same residence			-0.38 *	
Residence type 1) Detached house (owner)	-0.36 *			-0.71 ***
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)		0.58 **		
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income		0.41 *		0.47 **

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-6. The matters discussed here are the responsibility of people living in the present era.

	Session 1 (n=23)		Session 2 (n=22)		Session 3 (n=19)		Session 4 (n=18)	
	β		β		β		β	
Critical Thinking	0.65	**						
Generativity	-0.42	*						
Scientific Literacy	0.31	*	0.53	**	0.40	*		
SVO (0:proself, 1: prosocial)								
Gender (0: M, 1: F)								
Age	-0.48	**						
Occupation 1) Housewife/househusband					-0.39	*		
Occupation 2) Part-time/casual work			-0.46	*				
Occupation 3) Employee (e.g., company employee)								
Occupation 4) Self-employed or family employee								
Occupation 5) Retired/pensioner			-0.33	†				
Occupation 6) Student								
Occupation 7) Others					-0.46	**		
Household size (no. of members)								
No. of years in same residence								
Residence type 1) Detached house (owner)			-0.43	*	-0.49	**		
Residence type 2) Detached house (renter)								
Residence type 3) Apartment (owner)								
Residence type 4) Apartment (renter)	-0.65	***						
Residence type 5) Other								
Household income							0.46	†

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-7.　The matters discussed here are issues that cannot be solved solely by people living in the present era.

	Session 1 (n=23) β	Session 2 (n=22) β	Session 3 (n=19) β	Session 4 (n=18) β
Critical Thinking			-0.64 ***	
Generativity		-0.54 *		
Scientific Literacy				
SVO (0:proself, 1: prosocial)				0.31　n.s.
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)			0.37 *	
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner		-0.34 †		
Occupation 6) Student				
Occupation 7) Others		0.37 †		
Household size (no. of members)				
No. of years in same residence				-0.52 *
Residence type 1) Detached house (owner)				
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)	0.32　n.s.			

Note. *** $p<.001$, ** $p<.01$, * $p<.05$, † $p<.10$. β is a coefficient value in regression analysis.

Q1-8. The solution to matters discussed here is something expected of a future era.

	Session 1 (n=23) β		Session 2 (n=22) β		Session 3 (n=19) β		Session 4 (n=18) β	
Critical Thinking	0.41	*						
Generativity			-0.47	*				
Scientific Literacy								
SVO (0:proself, 1: prosocial)								
Gender (0: M, 1: F)			-0.40	*	-0.49	*		
Age								
Occupation 1) Housewife/househusband					-0.53	**	-0.50	*
Occupation 2) Part-time/casual work								
Occupation 3) Employee (e.g., company employee)	0.33	†						
Occupation 4) Self-employed or family employee								
Occupation 5) Retired/pensioner								
Occupation 6) Student								
Occupation 7) Others								
Household size (no. of members)					-0.42	†		
No. of years in same residence								
Residence type 1) Detached house (owner)								
Residence type 2) Detached house (renter)								

	Session 1		Session 2	Session 3		Session 4	
Residence type 3) Apartment (owner)						0.43	*
Residence type 4) Apartment (renter)	-0.63	**		-0.38	*		
Residence type 5) Other							
Household income				0.63	**		

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-9. What was concluded in this discussion is something that future generations would also hope for.

	Session 1 (n=23) β		Session 2 (n=22) β	Session 3 (n=19) β		Session 4 (n=18) β	
Critical Thinking	0.67	***		-0.69	***		
Generativity				0.82	***		
Scientific Literacy				0.40	**		
SVO (0:proself, 1: prosocial)				-0.47	***		
Gender (0: M, 1: F)						-0.50	*
Age						-0.32	†
Occupation 1) Housewife/househusband				-0.73	***		
Occupation 2) Part-time/casual work							
Occupation 3) Employee (e.g., company employee)				0.26	*		
Occupation 4) Self-employed or family employee	-0.57	**					
Occupation 5) Retired/pensioner							
Occupation 6) Student							
Occupation 7) Others							
Household size (no. of members)	0.35	*		-0.55	***	-0.36	†

No. of years in same residence	0.46 **			
Residence type 1) Detached house (owner)			-0.24 **	
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				0.67 **
Residence type 4) Apartment (renter)		-0.32 n.s.		
Residence type 5) Other				
Household income			0.32 **	

Note. *** $p<.001$, ** $p<.01$, * $p<.05$, † $p<.10$. β is a coefficient value in regression analysis.

Q1-10. That which we enjoy today is a legacy inherited from our ancestors.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)
	β	β	β	β
Critical Thinking				
Generativity		-0.47 *		
Scientific Literacy				
SVO (0:proself, 1: prosocial)	-0.34 n.s.			
Gender (0: M, 1: F)			-0.64 **	
Age				
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others			-0.53 **	

Household size (no. of members)	-0.45	*
No. of years in same residence		
Residence type 1) Detached house (owner)		
Residence type 2) Detached house (renter)		
Residence type 3) Apartment (owner)		
Residence type 4) Apartment (renter)		
Residence type 5) Other		
Household income		

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-11. That which we enjoy today must be passed down to future generations.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)	
	β	β	β	β	
Critical Thinking					
Generativity				-0.38	n.s.
Scientific Literacy					
SVO (0:proself, 1: prosocial)	-0.34 n.s.				
Gender (0: M, 1: F)					
Age					
Occupation 1) Housewife/househusband			-0.59 **		
Occupation 2) Part-time/casual work					
Occupation 3) Employee (e.g., company employee)					
Occupation 4) Self-employed or family employee					
Occupation 5) Retired/pensioner					
Occupation 6) Student					

Occupation 7) Others		
Household size (no. of members)	0.39	†
No. of years in same residence	0.35	†
Residence type 1) Detached house (owner)		
Residence type 2) Detached house (renter)		
Residence type 3) Apartment (owner)		
Residence type 4) Apartment (renter)		
Residence type 5) Other		
Household income		

Note. *** *p*<.001, ***p*<.01, **p*<.05, †*p*<.10. β is a coefficient value in regression analysis.

Q1-12. The themes talked about in the discussion are important issues of the present.

	Session 1 (n=23)		Session 2 (n=22)		Session 3 (n=19)		Session 4 (n=18)	
	β		β		β		β	
Critical Thinking								
Generativity								
Scientific Literacy	0.44	*			0.37	*	0.53	**
SVO (0:proself, 1: prosocial)	-0.35	*						
Gender (0: M, 1: F)			-0.66	***			-0.23	n.s.
Age								
Occupation 1) Housewife/househusband	-0.42	*	-0.31	*	-0.61	***	-0.35	†
Occupation 2) Part-time/casual work								
Occupation 3) Employee (e.g., company employee)								
Occupation 4) Self-employed or family employee			0.32	*				

Occupation 5) Retired/pensioner			-0.24 †	
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				
No. of years in same residence	-0.54 **			
Residence type 1) Detached house (owner)		-0.42 *	-0.25 †	-0.50 **
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income		0.30 *		

Note. *** *p*<.001, ***p*<.01, *p*<.05, †*p*<.10. β is a coefficient value in regression analysis.

Q1-13. The themes talked about in the discussion are important issues for the future.

	Session 1 (n=23) β	Session 2 (n=22) β	Session 3 (n=20) β	Session 4 (n=18) β
Critical Thinking				
Generativity				
Scientific Literacy			0.39 *	0.45 *
SVO (0:proself, 1: prosocial)		-0.28 n.s.		
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband	-0.51 *	-0.38 †	-0.39 *	-0.50 *
Occupation 2) Part-time/casual work				

	Session 1	Session 2	Session 3	Session 4
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee				-0.44 *
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				
No. of years in same residence				
Residence type 1) Detached house (owner)				
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)		0.38 †	0.38 *	
Residence type 5) Other				
Household income				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-14. The members of my group debated goals that seemed desirable for society as a whole.

	Session 1 (n=23) β	Session 2 (n=22) β	Session 3 (n=20) β	Session 4 (n=18) β
Critical Thinking	0.56 **			
Generativity	0.34 n.s.			
Scientific Literacy				
SVO (0:proself, 1: prosocial)				
Gender (0: M, 1: F)			-0.45 *	
Age				
Occupation 1) Housewife/househusband				-0.45 †

Occupation 2) Part-time/casual work	
Occupation 3) Employee (e.g., company employee)	
Occupation 4) Self-employed or family employee	-0.48 *
Occupation 5) Retired/pensioner	
Occupation 6) Student	
Occupation 7) Others	
Household size (no. of members)	
No. of years in same residence	
Residence type 1) Detached house (owner)	
Residence type 2) Detached house (renter)	
Residence type 3) Apartment (owner)	
Residence type 4) Apartment (renter)	
Residence type 5) Other	
Household income	

Note. *** *p*<.001, **p<.01, *p<.05, †p<.10. β is a coefficient value in regression analysis.

Q1-15. The members of my group shared goals that seemed desirable for society as a whole.

	Session 1 (n=23)		Session 2 (n=22)		Session 3 (n=20)		Session 4 (n=18)	
	β		β		β		β	
Critical Thinking	0.37	*	0.54	**				
Generativity								
Scientific Literacy							0.37	†
SVO (0:proself, 1: prosocial)			-0.29	n.s.				
Gender (0: M, 1: F)					-0.83	***		
Age					-0.62	**		

	Session 1	Session 2	Session 3	Session 4
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)				0.38 †
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner	0.44 *			
Occupation 6) Student				
Occupation 7) Others	0.44 *		0.40 **	
Household size (no. of members)			-0.57 **	
No. of years in same residence			0.87 ***	
Residence type 1) Detached house (owner)				-0.51 *
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)			0.29 *	
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income	0.69 **		0.47 **	

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-16. The conclusions reached in the discussion are acceptable.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=20)	Session 4 (n=18)
	β	β	β	β
Critical Thinking	0.67 ***			
Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)			-0.24 n.s.	
Gender (0: M, 1: F)		-0.59 **		

	Session 1		Session 2		Session 3		Session 4	
Age			0.78	***				
Occupation 1) Housewife/househusband					-0.41	*		
Occupation 2) Part-time/casual work					-0.41	*	-0.51	*
Occupation 3) Employee (e.g., company employee)								
Occupation 4) Self-employed or family employee								
Occupation 5) Retired/pensioner					-0.58	**		
Occupation 6) Student								
Occupation 7) Others			0.39	*				
Household size (no. of members)					-0.48	**		
No. of years in same residence					0.31	†		
Residence type 1) Detached house (owner)								
Residence type 2) Detached house (renter)								
Residence type 3) Apartment (owner)								
Residence type 4) Apartment (renter)			0.55	**				
Residence type 5) Other								
Household income	0.38	*	0.52	**				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q1-17. In today's discussion, I thought about things from the perspective of a person living in the present day.

	Session 1 (n=23)		Session 2 (n=22)		Session 3 (n=20)		Session 4 (n=18)	
	β		β		β		β	
Critical Thinking	-0.56	***						

Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)	-0.36 *			
Gender (0: M, 1: F)				0.31 *
Age			0.40 *	0.64 ***
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work	-0.29 *	0.41 *	0.51 **	
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee	-0.33 *		0.31 †	
Occupation 5) Retired/pensioner		0.51 *		
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				
No. of years in same residence				
Residence type 1) Detached house (owner)	-0.40 **	0.47 *	0.46 *	0.54 **
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income				

Note. *** $p<.001$, ** $p<.01$, * $p<.05$, † $p<.10$. β is a coefficient value in regression analysis.

Q1-18. In today's discussion, I thought about things from the perspective of a future generation.

	Session 1 (n=23) β	Session 2 (n=22) β	Session 3 (n=20) β	Session 4 (n=18) β
Critical Thinking	0.54 **			
Generativity				
Scientific Literacy			0.50 **	0.50 **
SVO (0:proself, 1: prosocial)				-0.40 *
Gender (0: M, 1: F)	0.21 n.s.		-0.51 **	
Age				
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)	-0.42 **	0.36 *		0.22 n.s.
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)			-0.50 **	
No. of years in same residence				
Residence type 1) Detached house (owner)		-0.64 ***	-0.57 ***	-0.73 ***
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)	-0.41 **			
Residence type 5) Other				
Household income				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q2-1. The realization of a low-carbon society that conserves limited energy resources is an important issue for Suita City.

	Session 1 (n=23) β		Session 2 (n=22) β		Session 3 (n=20) β		Session 4 (n=18) β	
Critical Thinking								
Generativity			-0.57	**				
Scientific Literacy	0.59	***	0.27	†	0.28	n.s.	0.60	**
SVO (0:proself, 1: prosocial)	-0.35	*					-0.25	*
Gender (0: M, 1: F)								
Age								
Occupation 1) Housewife/househusband					-0.60	**	-0.47	**
Occupation 2) Part-time/casual work			-0.28	†	-0.34	*		
Occupation 3) Employee (e.g., company employee)	0.42	**						
Occupation 4) Self-employed or family employee								
Occupation 5) Retired/pensioner							-0.41	**
Occupation 6) Student								
Occupation 7) Others								
Household size (no. of members)			0.60	**			-0.25	†
No. of years in same residence								
Residence type 1) Detached house (owner)	-0.60	***					-0.28	*
Residence type 2) Detached house (renter)								
Residence type 3) Apartment (owner)								
Residence type 4) Apartment (renter)			0.31	†				

Residence type 5) Other

Household income

Note. *** *p*<.001, ***p<.01, **p<.05, †*p<.10. β is a coefficient value in regression analysis.

Q2-2. The formation of a social system that will manage its resources is an important issue for Suita City.

	Session 1 (n=23) β	Session 2 (n=22) β	Session 3 (n=20) β	Session 4 (n=18) β
Critical Thinking				
Generativity				
Scientific Literacy		0.39 *		0.86 ***
SVO (0:proself, 1: prosocial)				-0.35 *
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband			-0.44 **	
Occupation 2) Part-time/casual work	-0.59 **	-0.38 *	-0.60 ***	
Occupation 3) Employee (e.g., company employee)		0.29 †		
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner				-0.55 **
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				-0.31 †
No. of years in same residence			0.54 **	
Residence type 1) Detached house (owner)	-0.57 **	-0.54 **	-0.68 ***	-0.41 *
Residence type 2) Detached house (renter)				

Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income	0.40	*	0.39	**

Note. *** *p*<.001, **p<.01, *p*<.05, †*p*<.10. β is a coefficient value in regression analysis.

Q2-3. The implementation of environmentally friendly practices by citizens is an important issue for Suita City.

	Session 1 (n=23)		Session 2 (n=22)		Session 3 (n=20)		Session 4 (n=18)	
	β		β		β		β	
Critical Thinking								
Generativity							-0.37	†
Scientific Literacy							0.45	*
SVO (0:proself, 1: prosocial)								
Gender (0: M, 1: F)			-0.47	*			-0.53	*
Age								
Occupation 1) Housewife/househusband	-0.28	n.s.			-0.49	**		
Occupation 2) Part-time/casual work	-0.39	*	-0.36	†	-0.49	**		
Occupation 3) Employee (e.g., company employee)								
Occupation 4) Self-employed or family employee								
Occupation 5) Retired/pensioner								
Occupation 6) Student								
Occupation 7) Others								
Household size (no. of members)								
No. of years in same residence								

	Session 1		Session 2		Session 3		Session 4	
Residence type 1) Detached house (owner)	-0.54	**	-0.73	**			-0.40	†
Residence type 2) Detached house (renter)								
Residence type 3) Apartment (owner)								
Residence type 4) Apartment (renter)								
Residence type 5) Other								
Household income			0.37	*	-0.35	*		

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q2-4. I feel emotionally attached to Suita City.

	Session 1 (n=23)		Session 2 (n=22)		Session 3 (n=20)		Session 4 (n=17)	
	β		β		β		β	
Critical Thinking								
Generativity	-0.29	n.s.	-0.33	n.s.			-0.58	*
Scientific Literacy	0.27	n.s.						
SVO (0:proself, 1: prosocial)	-0.53	**			-0.50	**		
Gender (0: M, 1: F)					0.30	n.s.		
Age								
Occupation 1) Housewife/househusband								
Occupation 2) Part-time/casual work					-0.42	*		
Occupation 3) Employee (e.g., company employee)								
Occupation 4) Self-employed or family employee	-0.55	*			-0.86	**		

	Session 1	Session 2	Session 3	Session 4
Occupation 5) Retired/pensioner			-0.51 *	
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)	0.53 *		0.60 **	
No. of years in same residence			0.77 **	
Residence type 1) Detached house (owner)		-0.32 n.s.		
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)	0.53 **		0.60 **	
Residence type 5) Other				
Household income	-0.40 *		-0.78 **	

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q2-5.I want my children and grandchildren to feel an emotional attachment to Suita City.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=20)	Session 4 (n=18)
	β	β	β	β
Critical Thinking				
Generativity				-0.43 †
Scientific Literacy				
SVO (0:proself, 1: prosocial)			-0.29 n.s.	
Gender (0: M, 1: F)				
Age		-0.37 †	-0.69 **	
Occupation 1) Housewife/househusband	0.28 n.s.		-0.30 †	
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)	0.70 ***			

	Session 1	Session 2	Session 3	Session 4
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner			0.60 *	
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)	0.57 **			
No. of years in same residence				
Residence type 1) Detached house (owner)	-0.41 *			-0.38 †
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income	-0.79 ***			

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q2-6. I want to continue to live in Suita City.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=20)	Session 4 (n=17)
	β	β	β	β
Critical Thinking				
Generativity				-0.58 *
Scientific Literacy		0.50 *		
SVO (0:proself, 1: prosocial)		-0.37 †	-0.31 †	
Gender (0: M, 1: F)				
Age			-0.71 **	
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work			-0.29 n.s.	

	Session 1	Session 2	Session 3	Session 4
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee	-0.56 **			
Occupation 5) Retired/pensioner			0.78 **	
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				
No. of years in same residence				
Residence type 1) Detached house (owner)		-0.37 †		
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)	0.42 *			
Residence type 5) Other				
Household income				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q2-7. I want my children and grandchildren to continue living in Suita City.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=20)	Session 4 (n=18)
	β	β	β	β
Critical Thinking				
Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)				
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband				

Occupation 2) Part-time/casual work						
Occupation 3) Employee (e.g., company employee)			0.33	n.s.	0.45	*
Occupation 4) Self-employed or family employee	-0.36	†				
Occupation 5) Retired/pensioner						
Occupation 6) Student						
Occupation 7) Others						
Household size (no. of members)						
No. of years in same residence						
Residence type 1) Detached house (owner)			-0.34	n.s.	-0.56	**
Residence type 2) Detached house (renter)						
Residence type 3) Apartment (owner)						
Residence type 4) Apartment (renter)	0.50	*				
Residence type 5) Other						
Household income						

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q2-8. Suita City will be a great place to live in 2050.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=20)	Session 4 (n=18)
	β	β	β	β
Critical Thinking				
Generativity				
Scientific Literacy			0.71 ***	
SVO (0:proself, 1: prosocial)			-0.48 **	
Gender (0: M, 1: F)				
Age				

	Session 1	Session 2	Session 3	Session 4
Occupation 1) Housewife/househusband	-0.33 †			
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)	-0.57 **			
Occupation 4) Self-employed or family employee		0.50 *		
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)		0.37 *	0.19 n.s.	
No. of years in same residence			-0.75 ***	
Residence type 1) Detached house (owner)				-0.41 †
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)		0.54 **		
Residence type 4) Apartment (renter)			-0.40 **	
Residence type 5) Other				
Household income				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q2-9. Feeling a sense of one's own individual importance will also be important for people in the Year 2050.

	Session 1 (n=23)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)
	β	β	β	β
Critical Thinking				
Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)				

Gender (0: M, 1: F)	-0.42 *	-0.38 †	-0.63 **	
Age				
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee		0.30 n.s.		
Occupation 5) Retired/pensioner		0.32 n.s.		
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				
No. of years in same residence				
Residence type 1) Detached house (owner)		-0.46 *		
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)	0.51 *		0.48 *	0.41 †
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income	-0.28 n.s.			

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q3-1. Living an affluent lifestyle

	Session 1 (n=22)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)
	β	β	β	β
Critical Thinking		-0.42 *		
Generativity				
Scientific Literacy				

	Session 1	Session 2	Session 3	Session 4
SVO (0:proself, 1: prosocial)		-0.52 **	-0.39 †	-0.37 *
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband				0.41 *
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)				0.60 **
Occupation 4) Self-employed or family employee		-0.37 †	-0.49 *	
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others		0.27 n.s.		
Household size (no. of members)				
No. of years in same residence				
Residence type 1) Detached house (owner)				
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)	0.37 †		0.30 n.s.	0.48 *
Residence type 4) Apartment (renter)	-0.31 n.s.			0.28 n.s.
Residence type 5) Other				
Household income				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q3-2. Living a healthy lifestyle

	Session 1 (n=22)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)
	β	β	β	β
Critical Thinking		-0.58 **		
Generativity		0.60 ***		

	Session 1 β	Session 2 β	Session 3 β	Session 4 β
Scientific Literacy		0.35 *		
SVO (0:proself, 1: prosocial)		-0.26 †		
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband	-0.36 †		-0.37 †	-0.59 *
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner	-0.41 †			
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)				0.41 n.s.
No. of years in same residence	0.53 *	0.55 ***	0.34 n.s.	
Residence type 1) Detached house (owner)		-0.64 ***	-0.53 *	
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income				-0.58 *

Note. *** *p*<.001, **p*<.01, *p*<.05, †*p*<.10. β is a coefficient value in regression analysis.

Q3-3. Living a cultured lifestyle

	Session 1 (n=22) β	Session 2 (n=22) β	Session 3 (n=19) β	Session 4 (n=18) β
Critical Thinking				

	Session 1	Session 2	Session 3	Session 4
Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)				-0.38 †
Gender (0: M, 1: F)		-0.51 **		
Age				0.66 **
Occupation 1) Housewife/househusband			0.59 *	
Occupation 2) Part-time/casual work				
Occupation 3) Employee (e.g., company employee)			1.20 ***	
Occupation 4) Self-employed or family employee	0.42 *	0.45 *	0.88 **	
Occupation 5) Retired/pensioner			0.38 n.s.	
Occupation 6) Student				
Occupation 7) Others	-0.47 *			
Household size (no. of members)		0.26 n.s.		
No. of years in same residence			0.59 *	
Residence type 1) Detached house (owner)			-0.89 ***	-0.41 †
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)		0.47 *		
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income				

Note. *** *p*<.001, ***p*<.01, *p*<.05, †*p*<.10. β is a coefficient value in regression analysis.

Q3-4. These measures are feasible

	Session 1 (n=22)	Session 2 (n=22)	Session 3 (n=19)	Session 4 (n=18)
	β	β	β	β

Critical Thinking			-0.59 **
Generativity			
Scientific Literacy			
SVO (0:proself, 1: prosocial)			
Gender (0: M, 1: F)		-0.41 †	
Age			
Occupation 1) Housewife/househusband	-0.50 *		
Occupation 2) Part-time/casual work			-0.56 **
Occupation 3) Employee (e.g., company employee)			
Occupation 4) Self-employed or family employee			
Occupation 5) Retired/pensioner			
Occupation 6) Student			
Occupation 7) Others		-0.43 †	
Household size (no. of members)	-0.46 *	-0.49 *	
No. of years in same residence			
Residence type 1) Detached house (owner)			-0.36 *
Residence type 2) Detached house (renter)			
Residence type 3) Apartment (owner)		0.65 **	
Residence type 4) Apartment (renter)			
Residence type 5) Other			
Household income			-0.40 *

Note. *** *p*<.001, **p*<.01, *p*<.05, †*p*<.10. β is a coefficient value in regression analysis.

Q3-5. These measures could bring about an ideal future

	Session 1	Session 2	Session 3	Session 4
	(n=22)	(n=22)	(n=19)	(n=18)

	β	β	β	β
Critical Thinking				-0.47 *
Generativity			0.35 **	
Scientific Literacy			0.46 **	0.78 ***
SVO (0:proself, 1: prosocial)				-0.27 n.s.
Gender (0: M, 1: F)			-0.40 **	
Age			0.57 **	
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work	-0.41 †		-0.27 *	-0.30 n.s.
Occupation 3) Employee (e.g., company employee)		0.33 n.s.	0.77 **	
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner				
Occupation 6) Student				
Occupation 7) Others			-0.22 †	
Household size (no. of members)				
No. of years in same residence				
Residence type 1) Detached house (owner)	-0.50 *	-0.39 †	-0.48 ***	-0.40 *
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q3-6. Suita City is sustainable

	Session 1 (n=20) β		Session 2 (n=22) β		Session 3 (n=19) β		Session 4 (n=18) β	
Critical Thinking								
Generativity								
Scientific Literacy			0.50	**	0.41	*		
SVO (0:proself, 1: prosocial)								
Gender (0: M, 1: F)								
Age								
Occupation 1) Housewife/househusband								
Occupation 2) Part-time/casual work								
Occupation 3) Employee (e.g., company employee)			0.54	**	0.63	**	0.55	**
Occupation 4) Self-employed or family employee	0.44	†						
Occupation 5) Retired/pensioner							0.31	n.s.
Occupation 6) Student								
Occupation 7) Others								
Household size (no. of members)								
No. of years in same residence								
Residence type 1) Detached house (owner)					-0.34	†	-0.56	**
Residence type 2) Detached house (renter)								
Residence type 3) Apartment (owner)	0.64	*						
Residence type 4) Apartment (renter)			0.28	n.s.				
Residence type 5) Other								
Household income					-0.45	*		

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q3-7. Reducing uncertainties about what could occur in future

	Session 1 (n=22) β	Session 2 (n=22) β	Session 3 (n=19) β	Session 4 (n=18) β
Critical Thinking				-0.71 **
Generativity				1.05 ***
Scientific Literacy				
SVO (0:proself, 1: prosocial)				-0.37 *
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband				-0.48 *
Occupation 2) Part-time/casual work	-0.27 n.s.	-0.46 *	-0.57 *	
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee				
Occupation 5) Retired/pensioner		-0.27 n.s.		
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)	-0.48 *			-0.84 ***
No. of years in same residence		0.61 **		
Residence type 1) Detached house (owner)	-0.73 ***	-0.71 ***	-0.33 n.s.	
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)				
Residence type 4) Apartment (renter)				
Residence type 5) Other				
Household income	0.29 n.s.			

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.

Q3-8. Leaving room for people in the future to be able to make choices for themselves

	Session 1 (n=22) β	Session 2 (n=22) β	Session 3 (n=19) β	Session 4 (n=18) β
Critical Thinking	0.35 †			
Generativity				
Scientific Literacy				
SVO (0:proself, 1: prosocial)				
Gender (0: M, 1: F)				
Age				
Occupation 1) Housewife/househusband				
Occupation 2) Part-time/casual work		-0.58 **		
Occupation 3) Employee (e.g., company employee)				
Occupation 4) Self-employed or family employee			0.34 †	
Occupation 5) Retired/pensioner	-0.45 *			
Occupation 6) Student				
Occupation 7) Others				
Household size (no. of members)		0.42 *		
No. of years in same residence				
Residence type 1) Detached house (owner)			-0.60 **	
Residence type 2) Detached house (renter)				
Residence type 3) Apartment (owner)	0.45 *			0.39 n.s.
Residence type 4) Apartment (renter)	-0.52 **			
Residence type 5) Other				
Household income				

Note. *** $p<.001$, **$p<.01$, *$p<.05$, †$p<.10$. β is a coefficient value in regression analysis.