

### Appendix 1: Participant demographics

Number	Gender	Major	Grade
1	male	Clinical Medicine	Junior
2	female	Clinical Medicine	Junior
3	female	Clinical Medicine	Junior
4	female	Clinical Medicine	Junior
5	female	Clinical Medicine	Junior
6	male	Clinical Medicine	Junior
7	female	Clinical Medicine	Junior
8	female	Clinical Medicine	Junior
9	female	Clinical Medicine	Junior
10	female	Clinical Medicine	Junior
11	female	Clinical Medicine	Junior
12	female	Clinical Medicine	Junior
13	female	Clinical Medicine	Junior
14	female	Clinical Medicine	Junior
15	female	Clinical Medicine	Junior
16	male	Clinical Medicine	Sophomore
17	female	Clinical Medicine	Sophomore
18	female	Stomatology	Sophomore
19	female	Information Management and Information Systems	Sophomore
20	female	Information Management and Information Systems	Sophomore
21	female	Information Management and Information Systems	Sophomore
22	female	Information Management and Information Systems	Sophomore
23	male	Clinical Pharmacy	Sophomore
24	female	Health Inspection and Quarantine	Sophomore
25	female	Intelligent Medical Engineering	Sophomore
26	female	Intelligent Medical Engineering	Sophomore
27	female	Clinical Medicine	Freshmen
28	female	Forensic medicine	Freshmen
29	male	Pharmacy	Freshmen
30	female	Pharmacy	Freshmen
31	female	Pharmacy	Freshmen
32	female	Public Administration	Freshmen
33	female	Clinical Medicine	Freshmen
34	female	Pharmacy	Freshmen
35	female	Ophthalmic Optics	Freshmen
36	female	Clinical Medicine	Freshmen
37	female	Clinical Medicine	Freshmen
38	female	Clinical Medicine	Freshmen
39	female	Clinical Medicine	Freshmen
40	female	Intelligent Medical Engineering	Freshmen
41	male	Intelligent Medical Engineering	Freshmen
42	female	Intelligent Medical Engineering	Freshmen

**Appendix 2:** The health communication videos recorded by the participants

<b>Number</b>	<b>Mins</b>	<b>Title</b>
1	01:07+00:53+04:23	Are you still doing this with a foreign object lodged in your throat?
2	1:32	The first deposit for life - Hyperopic reserve.
3	2:29	Glaucoma - the silent thief of sight.
4	1:54	What are the secrets of age-related cataracts?
5	2:34	Whoa! Who's hiding in the carbonated drink?
6	1:07+2:15+0:50+2:33	Medical Students Guide You Through a 5-Minute Overview of Common Imaging Diagnostics.
7	3:01	Does carbonated soft drinks, also known as "happy water," really make your body happy?
8	0:55	Why do lip balms make my lips drier?
9	1:21	How to choose the right lip balm for You?
10	1:31	Demonstration of Lip Balm Making Process.
11	1:54	Do you know that fatty liver can be reversed?
12	1:59	Do you know how dangerous uncontrolled fatty liver can be?
13	2:24	How much do you know about the dangers of drinking alcohol?
14	1:10	A heart attack isn't pain? !
15	2:15	Angina - the root of heart disease.
16	1:23	How much do you know about heart attacks that happen close to you?

### **Appendix 3: The problems of reflecting on health communication**

#### **The problems of reflecting on health communication**

Leveraging the National Science and Technology Activity Week, participants proactively engaged in health communication.

1. Could you provide a concise overview of one or more public outreach initiatives that occurred during the event?
2. Prior to the event, as you engaged in the preparation of your health communication through reviewing, researching, discussing, and enhancing your foundational medical knowledge, what considerations did you have regarding the preparation of health communication from the standpoint of basic medical knowledge?
3. During the event, after experiencing public outreach and education, you immediately reflect on and deepen your existing knowledge base, making adjustments as needed to meet the needs of visitors. Reflect on how these new learnings have impacted your health communication.
4. Reflect on how this health communication experience will impact your future learning, life, and work as a whole, and share your thoughts on the connection between health science communication and basic medical courses.

#### **Appendix 4: Semi-structured Interview Guide**

Introduction: Thank you for participating in our science communication event. We would like to ask you a few questions about your experience. Your feedback will help us improve future activities.

Questions:

1. How clear was the information provided by the students?
2. Did you find the information credible?
3. Did the information influence any health-related intention or behavior?

## Appendix 5: Code frequencies

<b>Codes</b>	<b>Frequency</b>	<b>General proportion</b>
1.a. Thinking Expansion	5	3.07%
1.b. Improvisation	4	2.45%
1.c. Balancing clinical practice with public education	12	7.36%
2.a. Information retrieval	10	6.13%
2.b. Association study	7	4.29%
2.c. Research application	9	5.52%
3.a. Enthusiastic participation	8	4.91%
3.b. Growth accumulation	9	5.52%
3.c. Humanistic care	8	4.91%
4.a. Willingness to share	6	3.68%
4.b. Demand-driven health communication	11	6.75%
4.c. Language Expression	15	9.20%
5.a. Tool Applications	9	5.52%
5.b. Presentation methods	15	9.20%
6.a. Fundamental Theory	3	1.84%
6.b. Interdisciplinary Learning	9	5.52%
6.c. Depth of Knowledge	10	6.13%
6.d. Breadth of Knowledge	13	7.98%