

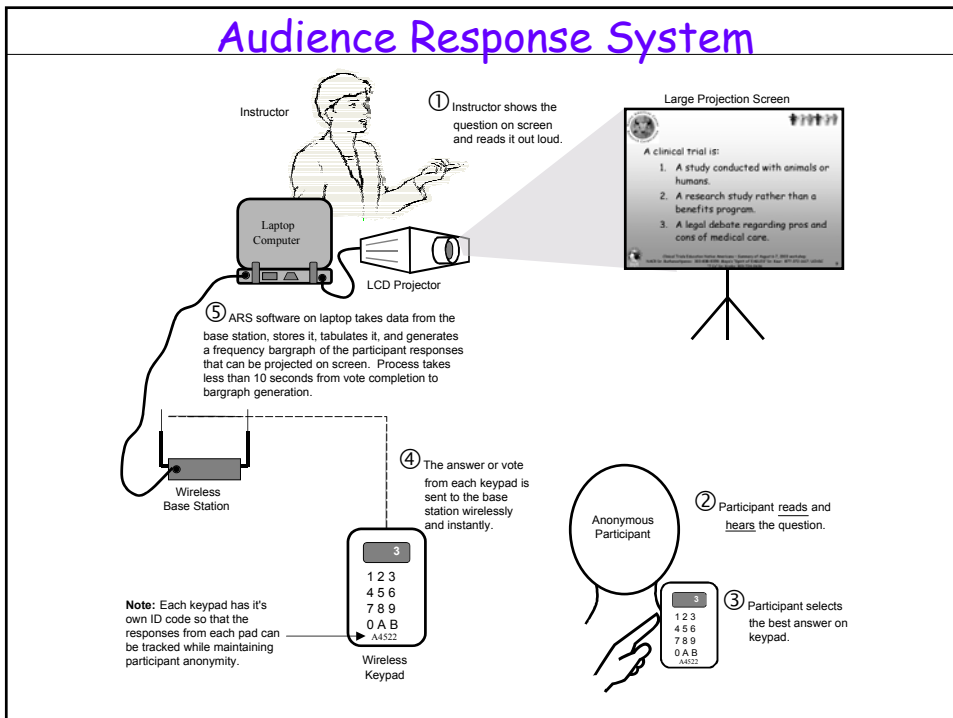
The Use of an Audience Response System (ARS) in Sustaining Participant Attention in Education Programs

Linda U. Krebs, RN, PhD, AOCN; Linda Burhansstipanov, MPH, DrPH; Alice Bradley, MA; Eduard Gamito, BS



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

1



Use of ARS

1. Demographic data collection
2. Pre- and post-workshop knowledge assessment
3. Audience polling: topical/opinion/choice
4. Educational leveling
5. General session evaluation



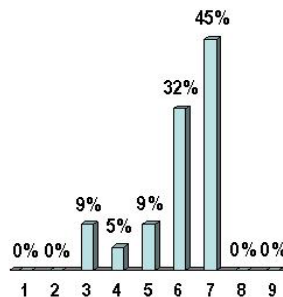
R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

3

Example of Demographics

How much schooling did you have?

1. elementary
2. junior high
3. high school
4. apprentice training
5. College AA degree
6. College BA, BS degree
7. Masters' degree
8. Doctorate or more
9. don't want to answer



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

4

Embedded Questions

Multiple uses:

opinion

knowledge

attitude

choice / options (*hyperlink to tailored content*)

educational "leveling"



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

5

Participant Assessment of ARS Technology

Focus of workshop	Clinical Trials 2002	Genetic Education for Native Americans 2003	Genetic Education for Native Americans 2003	Get on the Path to Health / Palliative Care (2004)	Genetic Education for Native Americans (2004)
Participant age groups	Adult-health professionals (CO)	Tribal college students (WA)	Adult professionals (WA)	Adults, intertribal community members (NV)	Children and parents / Indian Community (CO)
Length of workshop	1.5 hours	5 hours	1.5 hours	6 hours	1 hour
How well did you like using the keypad (audience response system) during the workshop? 1=poor; 2=fair; 3=average; 4=good; 5=excellent; 6=don't know	Not very 6% somewhat =32% Very= 62% n=150	1=0; 2=0; 3=0; 4=37.5%; 5=62.5% 6=0% n=8	1=0; 2=0; 3=0; 4=71.4%; 5=28.6% 6=0% n=14	didn't ask question	1=I didn't like them = 0% 2= I liked them = 100% 3=don't know/not sure = 0% n=10
How did using the ARS (keypads) influence your learning experience? 1=interfered with my learning; 2=made no difference in my learning; 3=improved my learning; 4=don't know	didn't ask question	1=0%; 2=0%; 3=100%; 4=0% n=8	1=0%; 2=50%; 3=42.9%; 4=7.1% n=14	1=0%; 2=20%; 3=80% 4=0%; n=5	didn't ask question
Would you want to have a keypad system included in future education presentations? no, yes, uncertain	No=10% yes=90% n=150	didn't ask question	didn't ask question	no=0% yes = 80% uncertain = 20% n=5	n=0% yes=100% Don't Know=0% n=10

ARS Evaluation in Multiple Educational Venues

Workshop	WS length	Participants	No.	Keypad in future	Internet Access
CT Providers 2002	1.5	Adult Professionals	150	90% yes 10% no	100% yes
7 Cs CO Coalition 2003	1.5	Adult Professionals	12	90% yes 10% no	100% yes
CTENA Aug 2003	1.5	Tribal Leaders, Professionals & Educators	21	100% yes	80% yes
GENA Oct 2003	5	Tribal college students	35	100% yes	50% yes
GENA Oct 2003	1.5	Adult professionals	15	90% yes	80% yes
Path March 2004	5	Adults, intertribal community members	18	100% yes	25% yes
Palliative Care March 2004	1	Adults, intertribal community members	18	100% yes	25% yes
GENA April 2004	1	Children and parents / Indian Community	5	100% yes	25% yes
Wellness Event May 2004	1	Tribal community adults	5	100% yes	25% yes
Path May 2004	3	Tribal community adults	6	100% yes	25% yes
Palliative May 2004	3	Tribal community adults	4	100% yes	25% yes
Lung Path Module June 2004	1.5	Tribal community adults (included professionals)	8	100% yes	88% yes

Advantages of ARS

- Participants
 - answer questions anonymously
 - receive instant feedback on answers
 - with low literacy can hear the questions and answer choices being read
 - with limited English-speaking ability are able to take part using an interpreter
 - are more likely to stay engaged because their continued input is requested



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
 NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

8

ARS Advantages

- Saves time - response data automatically entered into a database
- Data are easier to analyze, more complete, with fewer errors.
- Faculty forced to focus on key content (i.e., has the ARS items) that must be addressed
- Faculty receive immediate feedback on teachings; allows for “real-time” modification of the presentation.



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

9

Disadvantages of ARS

- ARS hardware and software is expensive
- ARS equipment must be brought to workshops
- Equipment/software can fail
- Faculty need to be trained on set up and use
- Faculty can make mistakes while using the equipment
- Need backup paper copies of demographic data for those who arrive late and session evaluations for those who leave early



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

10

ARS Responses

- "It made me pay closer attention because I wanted to get the answers correct."
- "I'm very shy and normally don't like to say anything in workshops. But I felt like I could really be a part of the group with this. And then I even raised my hand and made comments after a while!"
- "I liked it ... I especially liked seeing the correct answer after we had all done our answers."



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

11

Conclusions

- Use of ARS has increased overall data collection
- Data analysis is streamlined
- Participants and faculty get immediate feedback
- Participants feel more engaged in program which appears to enhance learning



R25 HG01866 P.I. Linda Burhansstipanov, DrPH 303-838-9359
NCI R25 CA82714 P.I. Linda U. Krebs, AOCN, PhD, 303-315-0052

12