

## Global Health Learning Center

### **mHealth Basics: Introduction to Mobile Technology for Health eLearning Course Participant Study Group Preliminary Report**

January 12 – February 4, 2015

<http://www.globalhealthlearning.org/community/89786>

#### Background

To enhance learners' understanding of the main concepts in the *mHealth Basics: Introduction to Mobile Technology for Health* course and develop the basic skills needed to plan and implement digital health programs in the field, the K4Health Project facilitated an online, time-bound, cohort-based learning event in which learners were able to receive virtual technical assistance from digital health subject matter experts as well as learn from each other by discussing questions, challenges, and successes in working in the digital health field.

The purpose of this study group was:

- to help explore and think critically about course concepts as they move through the course material
- to provide a virtual space for learners to connect with each other and with mHealth implementers from around the world
- to elicit and share relevant, practical programmatic experiences related to mHealth

The formal study group ran from January 12 – February 4, 2015. Prior to each day's discussion, the study group facilitators, Trinity Zan of FHI 360 and Nandini Jayarajan of Johns Hopkins Center for Communication Programs (CCP), asked participants to read a session or sessions of the course, then respond to discussion questions posted to the online forum. Participants were encouraged to visit the online learning space to reflect on the discussion questions, ask questions, and share experiences related to their professional work, as well as how they have and/or plan to apply what they have learned from the course into their jobs.

The study group participants included learners who had started the mHealth Basics course but had not earned a certificate, Global mHealth Forum attendees, and mHealth Working Group members. Because of the wide range of topics covered in the course, Ms. Zan and Ms. Jayarajan reached out to mHealth experts to participate in the study group as a "super user". The role of the super users was to share their experience in the field, answer technical questions, and help stimulate dialogue. In previous study groups, this role was done by one course author or subject matter expert. Invitations to participate as a super user were sent to 38 mHealth subject matter experts. Ultimately, 13 subject matter experts actively participated.

#### Discussion statistics

**Number of participants:** 177

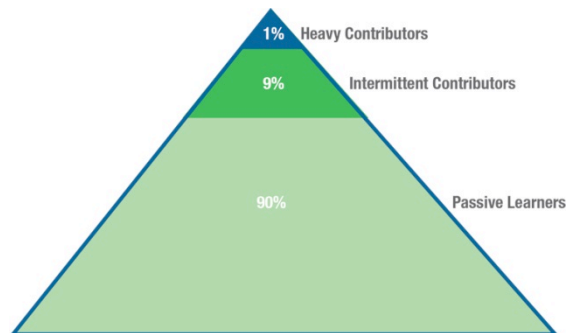
**Number of participants' countries:** 47

**Number of contributions:** 90 by 44 active participants (13 of which were super users)

**% of contributions from developing countries:** 32%

**Number of countries contributing:** 18; Benin, Bolivia, Cambodia, Canada, Egypt, Guinea-Bissau, India, Kenya, Malawi, Malaysia, Netherlands, Nigeria, Pakistan, Rwanda, South Africa, Tanzania, United States, Zambia

This participation rate of approximately 25% (44 of the 177 participants) is exceptionally high according to emerging research from the Nielsen Norman Group which suggests that in most online communities 90% of members are passive learners, while 9% of members contribute a little and 1% of members account for most of the contributions and interactions<sup>1</sup>.



## Main Themes and Guiding Discussion Questions

The following summarizes the main themes that were shared in response to the study group guiding discussion questions.

### Post 1

Questions related to Sessions 1-3: What is mHealth?; Why is mHealth Important?; Types of mHealth Applications

1. In **Session 1**, the terms mHealth, eHealth, and ICT are defined. These terms though, depending on who you talk to or the context you're working in, can continue to be a source of debate. Do you agree with the definitions of mHealth, eHealth, and ICT? Which terms are you most familiar with or use the most when speaking to your colleagues on this topic? What are the advantages and disadvantages of each option?
2. **Session 2** covers four reasons why mHealth is important. Are there other reasons not addressed? Why do you feel that mHealth is an important focus within global health? How might your view differ from other stakeholders?
3. In **Session 3** six types of mHealth applications in global health are described. What, if any, types of mHealth services are left out?

<sup>1</sup> Nielsen, J. October 9, 2006. "The 90-9-1 Rule for Participation Inequality in Social Media and Online Communities." Nielsen Norman Group, <http://www.nngroup.com/articles/participation-inequality/>.

## **Emerging themes and issues**

Words of appreciation and introductions were shared. Participants shared projects they are currently working on and remarked on how the session examples have inspired new ideas and thinking. Additionally, there was a robust discussion on the use of terms mHealth, eHealth, and ICT. Eventually, the term 'digital health' was introduced and many agreed that this was a better general description as it is a more encompassing term that can apply to multiple technologies and models.

### Post 2

Questions related to Session 4: Evidence on the Effect of mHealth

1. Session 4 notes that the available evidence base up to September 2013 demonstrates a positive effect of mHealth on social and behaviour change communication (specifically on health promotion, on medication/treatment adherence, and on stimulating healthy behaviors) and on workforce development, service delivery, and supply chain management. Are there noteworthy additions to the mHealth evidence base that are not included in this session?
2. Many people hold beliefs and assumptions about mHealth that are not based in evidence. Examples include an assumption that mHealth interventions are always more cost-effective than non-technology enabled alternatives. How can we, or how have you, dealt with these types of assumptions?
3. Session 4 outlines remaining gaps in the mHealth evidence base including more data on the effect of mHealth interventions on clinical and behavioural outcomes, more cost data, and evidence about the effect of mHealth interventions on social determinants of health such as gender-related power dynamics. What evidence about the effect of mHealth do you want or need the most, either for yourself or for stakeholders with whom you work?

## **Emerging themes and issues**

There were a few lines of discussion discussed. First, the participants clarified the difference between intervention and technology and how this affects the study approach. Second, there was conversation about the need for more mHealth evidence, but that documentation activities are often underfunded or quality of implementation is tied with success. Third, there was debate on the current gaps in evidence and the challenges to filling those gaps. Identified areas where more evidence was needed included cost effectiveness of solutions, comparison studies between non-digital and digital interventions, impact on health outcomes, evidence on equity, and evidence on integration in existing systems.

### Post 3

Questions related to Sessions 5 & 6: Overview of mHealth Solution Development; and Initial Planning and Concept Development

1. Compare the planning phase of the m4RH and ReMiND projects to a project that you have worked on, are planning to work on, or are currently involved in. Are there any differences between your process and these examples?
2. Deciding on whether mHealth is an appropriate solution for a problem you've identified can be hard. In your work, when do you determine that a health issue could benefit by adding an mHealth solution?
3. How have you successfully balanced partner and stakeholder engagement with sticking to project timelines to implement realistic and feasible solutions?

### **Emerging themes and issues**

Participants generally agreed with and were impressed with the m4RH and ReMiND project case studies. A point of discussion was that too often people get excited about the technology and solution before taking the time to articulate the problem they are trying to solve using the technology. Participants shared frameworks and different approaches they've used in identifying project questions and for laying groundwork for a successful solution model. They agreed that using such resources are helpful in deciding whether a digital solution is even appropriate, and in fully considering the elements needed to create behavior change. For balancing partner and stakeholder engagement, participants mentioned the need for consistent communication and active collaboration. It was also noted that in low infrastructure settings, building partnerships itself can be very challenging. Participants shared experiences on best practices for working in such scenarios.

### Post 4

Questions related to Session 7: Solution Design and Testing

1. What have been your experiences conducting user testing (for content or user interface) or what challenges might you envision?
2. What are some tips for selecting a platform and a technology partner?
3. How have you successfully integrated with an existing mHealth or ICT service? Give us your stories and emphasize the how.

### **Emerging themes and issues**

Participants emphasized the need for rigorous testing of both the content and the technology. Many even recommended involving users in the planning stage of the solution design to understand what information is desired, language preferences, digital literacy and comfort, and general understanding of the target audience culture and behavior around technology. Some participants shared challenges they've faced in this stage such as, difficulty gathering sufficient data and feedback to inform solution design and trouble coordinating with stakeholders who are not convinced on the value of the program. Answers to how participants choose technology and platforms mainly concerned ease of adoption and scale. Some noted more success using existing infrastructure and tools already used such as sending SMS texts to personal phones. However, for solutions that needed new technology built, participants recommended to look first for existing technology and vendors, or researching open source solutions, before investing in building custom solutions.

### Post 5

Questions related to Session 8: Monitoring and Evaluation

1. What is important to monitor during mHealth implementation/scale-up and what are example indicators?
2. What data do stakeholders want to receive during implementation?
3. How have you used M&E data to improve the intervention/services?

### **Emerging themes and issues**

Discussion on M&E focused more on the critical challenges participants have experienced with gathering data and addressing stakeholder interests. A main challenge in collecting data was the lack of sufficient demographic data, means of reaching out to users, or complications related to consent. Unless the target audience is required to submit information about themselves as part of their job, it can be very difficult and expensive to conduct key informant interviews or survey users. Most participants shared that they were dependent on passive data that the technology or platform automatically collects. Participants related that many stakeholders are interested in cost-effectiveness of a solution or impact on health outcomes. They noted that these are difficult to measure, but that looking at long term trends provides better insight into user behaviors and can inform product improvements. Some resources related to evaluating costs were also shared. A general shared sentiment on M&E was that while it's very challenging, some M&E is better than none.

### Post 6

Questions related to Session 9: Scale-up and Sustainability

1. What is the definition of scale and sustainability that different stakeholders use--donors, government reps, health care workers, etc?
2. Is there a role for continued donor-funding in a scaled/sustainable mHealth service?
3. Please share some examples of how you have built in scale/sustainability into the development and implementation phases of your mHealth solution.

### Emerging themes and issues

This post discussion circled around a polarizing question posed by a participant, “why all the focus on getting bigger?” Participants generally agreed that the question was more on trying understand when a solution has reached scale and is sustainable. Some posed that solutions that continued to be donor funded even partially, could be considered sustainable if it’s reach most of its target audience. One participant questioned why the burden of reaching scale needed to be held by one organization, and “scale” could also be achieved if one organization successfully implements a solution and other organizations adopt it for their own programs. A consistent recommendation for sustainability was that if there wasn’t an avenue for revenue generation, then for a solution to succeed long-term it needs to be absorbed and integrated in the public sector.

### Post-Study Group Survey Results

N of surveys completed	14 – Countries represented: Vietnam, UK, Egypt, Ethiopia, Pakistan, Zambia, India, Nigeria, and USA
% who felt participating in the study group helped better understand the course content?	100%
% who found the study group provided them an opportunity to learn from others dealing with similar issues	91.67%
% who shared information from the discussion with others	54.55%
% who posted a message in the study group	58.33%
Suggestions for improvement	<i>“finding the thread on the discussions, I got a bit confused and lost at times searching through the discussions and topics</i>

	<p><i>"I did not know that I was not logged in and had difficulty figuring out how to log in and then how to get back to the study group"</i></p> <p><i>"My only challenge was that I found it hard to fit the postings into my workday- it might be helpful to space the discussions out a bit more. I did find the weekly summaries to be a helpful synthesis."</i></p>
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For the full report on the post-study group online survey results, see Appendix on page 10.

### Lessons Learned and Possible Next Steps

The mHealth Basics Study Group was the third GHeL study group to date. The previous two study groups, Gender and Health Systems Strengthening Study Group and GIS Techniques Study Group were timed to coincide with the publication of the corresponding GHeL course. Each of these study groups had one or two study group facilitators to provide technical support, and one course author or subject matter expert to draft guided questions, answer learner questions, and stimulate discussion.

The mHealth Study Group tested a new model both in timing and facilitation. The study group was timed to correspond with an event, the Global mHealth Forum, to leverage the heightened health program manager interest in mHealth for further learning and connection with peers, and as a means to promote K4Health Digital Health Portfolio. As the mHealth Basics course had been published the previous year and the authorship had been largely a collaborative effort with input from multiple subject matter experts, K4Health decided to invite mHealth subject matter experts with in-depth experience in specific topic areas covered in the mHealth Basics course instead of just one subject matter expert with a broad understanding of all the topics covered in the course. Additionally, a lesson learnt from the previous two study groups was that the subject matter expert role can be an extremely time-intensive activity for one individual, spending up to 4 hours per post. K4Health's Digital Health team felt it would be more reasonable to ask many experts to spend up to an hour contributing to a topic on their specific area of expertise. This model required more coordination and active engagement with the subject matter by the study group facilitators, who drafted all posts and responded directly to learner contributions.

K4Health was successfully able to meet the purpose of this study group, specifically sharing relevant, practical programmatic experiences related to mHealth. Compared to the previous two study groups enrolled participants were considerably higher at 177 study group members. The mHealth Basics study group also on average had a higher number of comments per post, where the most active post had 21 comments compared to 18 comments and 16 comments in GIS Techniques study group and Gender and HSS study group respectively.

A recommendation from the previous two study groups was to turn on email notifications to alert participants when new comments were posted. While the GHeL team is currently working to incorporate this feature, unfortunately it was not live in time for the mHealth Basics study group. Instead the facilitators responded to feedback by providing clear summaries of discussions and member activity in regular emails sent to the group via MailChimp. Facilitators received emailed responses from some participants that these summaries were helpful.

A challenge the facilitators observed was accommodating the participants' wide range of mHealth knowledge and experience from novice to expert. Two participants after starting the course emailed the facilitators with feedback that the course content was too basic and as a result were no longer interested in participating in the study group. One participant mentioned that the course and study group were very programmatic and did not feel the scope was relevant to their work and that they were more interested in a general overview of the mHealth field.

K4Health asked for feedback from the super users on their experience. The super users who responded and actively participated reported that overall it was a positive experience. They found the facilitation to be active and clear, daily email summaries helpful, and the level of participation to be great. However, they reported issues with the community feature itself, specifically with negative user experience around navigation (ex. Links in email summaries led to pages with "Access denied" messages if the user was not logged into their account), theming issues (ex. Feature "felt clunky", buttons mislabeled such as "Request group membership"), and the integration of the course and study group was not intuitive. One super user also expressed some disappointment that there was not more participation from learners and that it was less interactive than expected.

Timing proved to be the biggest challenge. Both participants and super users expressed difficulty in carving out dedicated time for the study group as January and February was a busy time of year after the holidays. To accommodate schedules, the facilitators extended the study group time period by one week, and left the group open after the active facilitation period ended for participants to read the posts and comments at their convenience.



### **Summary and Recommendations**

- Study group was successful; it met its goals.
- Positive feedback on survey, even from those who were passive observers.
- Advance planning and agenda-setting made it run smoothly and on-time.
- Suggestions for improvement included feature user experience enhancements such as email notifications and more intuitive navigation.
- January and February are not optimal times of year for hosting a study group.

## Appendix: Full Survey Results

### Q1 In which country do you work?

#	Country:	Date
1	vietnam	2/23/2015 8:45 PM
2	UK	2/21/2015 12:49 PM
3	USA	2/20/2015 6:05 PM
4	various	2/20/2015 10:12 AM
5	USA	2/20/2015 10:07 AM
6	USA	2/20/2015 10:05 AM
7	USA	2/7/2015 3:23 PM

### Q2 Please describe the type of organization in which you work.

#	Responses	Date
1	university	2/23/2015 8:45 PM
2	Currently in UK but organisation I work part time for (for which I did this course) works in Tanzania, Kenya & Malawi. We provide low tech first aid training and are currently piloting an mHealth app via a Scottish Government funded grant	2/21/2015 12:49 PM
3	Educational institution	2/20/2015 6:05 PM
4	usaid	2/20/2015 10:12 AM
5	Academic/research -- strategic communication and KM	2/20/2015 10:07 AM
6	NGO	2/20/2015 10:05 AM
7	University	2/7/2015 3:23 PM
8	Ministry of Health-CAPA	2/7/2015 3:06 AM
9	NGO	2/6/2015 4:23 AM
10	Private tertiary care hospital	2/5/2015 10:52 PM
11	NGO	2/5/2015 1:05 PM
12	Non-governmental organisation working in research and applied Health	2/5/2015 11:30 AM
13	I am working with WORLD VISION INDIA	2/3/2015 11:51 PM
14	Non-governmental organiZation	2/3/2015 2:04 PM

### Q3 Did you complete the course:

Answer Choices	Responses	
Yes, before the study group began.	35.71%	5
Yes, as part of the study group.	35.71%	5
No, I started the course and plan to complete it.	21.43%	3
No, I started the course but don't plan to complete it.	7.14%	1
No, I didn't even start the course.	0.00%	0
<b>Total</b>		<b>14</b>

Q4 Did you develop an Action Plan after completing the course?

Answer Choices	Responses	
Yes	44.44%	4
No	55.56%	5
<b>Total</b>		<b>9</b>

Q5 Why didn't you?

#	Responses	Date
1	Planned to but moved to a new job during course	2/21/2015 12:53 PM
2	Didn't really seem suited to my needs	2/7/2015 3:24 PM
3	Competing demands	2/5/2015 1:08 PM
4	I was offline for a bit due to work travels thus did not manage to work on one	2/5/2015 11:32 AM

Q6 Was the time estimate of 2 hours and 30 minutes for this course accurate?

Answer Choices	Responses	
Yes, the time estimate was accurate.	88.89%	8
No, the course took less time to complete.	0.00%	0
No, the course took more time to complete.	11.11%	1
<b>Total</b>		<b>9</b>

Q7 Did you click on any of the links to additional resources in this course?

Answer Choices	Responses	
Yes	100.00%	12
No	0.00%	0
<b>Total</b>		<b>12</b>

Q8 Which sessions/topics did you find most useful?

#	Responses	Date
1	Can't remember them all now, sorry - I think I remember finding the initial intro topics useful	2/21/2015 12:53 PM
2	The intro piece was useful--clarity on common definitions.	2/20/2015 10:34 AM
3	All!	2/20/2015 10:05 AM
4	They were all interesting	2/7/2015 3:24 PM
5	How to start mHealth solution	2/7/2015 3:23 AM
6	All	2/6/2015 4:26 AM
7	Evidence and best practices	2/5/2015 1:08 PM
8	M&E, the session on planning and the session on scale up and sustainability	2/5/2015 11:32 AM
9	MONITERING SYSTEM	2/3/2015 11:53 PM
10	All	2/3/2015 2:05 PM

**Q9 Which sessions/topics do you feel like you could use more training on?**

#	Responses	Date
1	Solution planning/development/M&E/scaling: I feel like I've just dipped a toe in the water, but I don't feel like now I'm qualified to plan/develop/evaluate/scale an mHealth intervention. This being a "basics" course sort of made me wish for the "301"-level courses.	2/20/2015 10:34 AM
2	Planning phase to apply mHealth solutions	2/7/2015 3:23 AM
3	All	2/6/2015 4:26 AM
4	Evidence	2/5/2015 11:32 AM
5	MONITERING SYSTEM	2/3/2015 11:53 PM
6	Non	2/3/2015 2:05 PM

**Q10 If you could, what would you change about the course? Select all that apply.**

Answer Choices	Responses	
Make course shorter	0.00%	0
Make course longer	30.00%	3
Include more examples	90.00%	9
<b>Total Respondents: 10</b>		

#	Other (please specify)	Date
1	I really liked the length & no of examples. Would be interested to see examples in the urgent care arena as they become available (think a lot were MCNH related?)	2/21/2015 12:53 PM
2	Some of the quiz questions didn't seem like they'd been validated--might have been clear from an author's perspective, but not from a learner's.	2/20/2015 10:34 AM
3	give more details about the phases to apply mHealth solutions	2/7/2015 3:23 AM
4	More video examples	2/5/2015 1:08 PM

**Q11 Did participating in the study group help you to better understand the course content?**

Answer Choices	Responses	
Yes	100.00%	12
No	0.00%	0
<b>Total</b>		<b>12</b>

Q12 What specifically did you find useful about participating in the study group? Select all that relate to your experience.

Answer Choices	Responses	
It clarified concepts in the course	16.67%	2
It provided me with additional examples from the field	66.67%	8
It provided me with additional resources and references	41.67%	5
It provided me with an opportunity to ask questions that I had	16.67%	2
It provided me with an opportunity to learn from others dealing with similar issues	91.67%	11
<b>Total Respondents: 12</b>		

#	Other (please specify)	Date
1	commitment to study and time organization for studying it	2/7/2015 3:25 AM

Q13 To what extent do you feel that the discussion helped you to apply what you learned from the course?

Answer Choices	Responses	
I definitely feel more confident to apply what I have learned	33.33%	4
I feel somewhat confident to apply what I have learned	66.67%	8
I do not feel confident to apply what I have learned	0.00%	0
I did not learn anything new	0.00%	0
<b>Total</b>		<b>12</b>

Q14 What discussion thread was the most useful and informative during the participant study group? Why?

#	Responses	Date
1	The thread about evidence and buy-in was enlightening for me--interesting to hear about the practical nature of the "we need more evidence" argument.	2/20/2015 10:47 AM
2	I haven't read them yet	2/7/2015 3:25 AM
3	Evidence	2/5/2015 1:09 PM
4	the session on scale up and sustainability as this is the point we are at in my country	2/5/2015 11:35 AM
5	implementation of the the mHealth at grass root level	2/3/2015 11:57 PM
6	All	2/3/2015 2:08 PM

Q15 What parts of the discussion were not useful? Please provide suggestions for improvement.

#	Responses	Date
1	The amount of comments that were just people introducing themselves really surprised me--I was actually a little irritated. I find that kind of small talk a little bit time-wasting. Maybe start every study group with an "Introduce Yourself" thread to keep the other discussions more substance-focused?	2/20/2015 10:47 AM
2	I haven't read them yet.but you may encourage the participants to read the discussions by asking about issues they mentioned during discussions.	2/7/2015 3:25 AM
3	finding the thread on the discussions, I got a bit confused and lost at times searching through the discussions and topics	2/5/2015 11:35 AM
4	NA	2/3/2015 11:57 PM
5	Non	2/3/2015 2:08 PM

Q16 Did you have the opportunity to visit or download resources posted by group members in the discussion threads? Select all that apply:

Answer Choices	Responses	
mHealth Evidence ( <a href="http://www.mhealthevidence.org">www.mhealthevidence.org</a> )	81.82%	9
Global Health: Science and Practice ( <a href="http://www.ghspjournal.org">www.ghspjournal.org</a> )	36.36%	4
Knowledge for Health ( <a href="http://www.k4health.org">www.k4health.org</a> )	63.64%	7
mPowering Frontline Health Workers ( <a href="http://www.mpoweringhealth.org">www.mpoweringhealth.org</a> )	27.27%	3
mHealth Planning Guide ( <a href="http://www.k4health.org/toolkits/mhealth-planning-guide">www.k4health.org/toolkits/mhealth-planning-guide</a> )	45.45%	5
mHealth Knowledge ( <a href="http://www.mhealthknowledge.org/">http://www.mhealthknowledge.org/</a> )	54.55%	6
<b>Total Respondents: 11</b>		

#	Other (please specify)	Date
1	...but I'm an outlier.	2/20/2015 10:47 AM
2	not yet	2/3/2015 2:08 PM

Q17 Did you post a message in the study group?

Answer Choices	Responses	
Yes	58.33%	7
No	41.67%	5
<b>Total</b>		<b>12</b>

Q18 If so, how did you find posting?

Answer Choices	Responses	
Easy	85.71%	6
Difficult	14.29%	1
<b>Total</b>		<b>7</b>

Q19 Why didn't you post a message?

#	Responses	Date
1	Time was short - this mHealth course coincided with another course (Ebola) I signed up to before these dates were announced so I had less time than I would have liked. I did find it really useful that we could still log in after the official 2 weeks	2/21/2015 12:56 PM
2	I haven't tried. I don't have work experience because I have been not working for many years	2/7/2015 3:25 AM
3	No reason in particular	2/3/2015 2:09 PM

**Q20 What was difficult about posting?**

#	Responses	Date
1	I did not know that I was not logged in and had difficulty figuring out how to log in and then how to get back to the study group	2/20/2015 10:14 AM
2	I haven't tried	2/7/2015 3:25 AM
3	I am in field most of the time where network connectivity is less	2/3/2015 11:59 PM
4	No issue	2/3/2015 2:09 PM

**Q21 Did you share any information from the discussion with others (colleagues, friends, etc.)?**

Answer Choices	Responses	
Yes	54.55%	6
No	45.45%	5
<b>Total</b>		<b>11</b>

**Q22 Please let us know if you have any suggestions for future study group discussions or activities.**

#	Responses	Date
1	Will do - thank you(!)	2/21/2015 12:56 PM
2	Sort of wished for a Google Hangout-style chat with Peter Benjamin and JamesBon Tempo. But also not sure that would have been a great use of time if people weren't well-prepared for it.	2/20/2015 10:54 AM
3	My only challenge was that I found it hard to fit the postings into my workday- it might be helpful to space the discussions out a bit more. I did find the weekly summaries to be a helpful synthesis.	2/20/2015 10:07 AM
4	You may encourage the participants to read the discussions by asking them about issues evolved during the discussions	2/7/2015 3:25 AM