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Enhanced Learning Maps (ELM) Project
Cohort 1 Training – Evaluation Survey Summary

July 2016

The Enhanced Learning Maps (ELM) project is funded with a four-year U.S. Department of Education Enhanced Assessment Grant. The Center for Educational Testing and Evaluation (CETE) at the University of Kansas coordinates the project and it is administered by the Kansas State Department of Education. Additionally, there are four other state education agencies (SEA) collaborating in the project. Those SEAs include the Alaska Department of Education, Iowa Department of Education, Missouri Department of Education, and the Wisconsin Department of Public Instruction.

The overall goal of the ELM project is to produce learning maps for individual mathematics and English language arts standards and coherent groups of standards to help teachers plan instruction that is sensitive to cognitive development. During the first year of the project (October 1, 2015 through the current time), CETE staff have been developing resources for the learning maps. The development and refinement process will continue through the duration of the project. The learning maps will be accompanied by written and some (or selected) videotaped descriptions explaining the nodes and connections in each map. For each learning map, ELM project staff are generating an instructional activity and teacher's guide, providing a sample of how to draw out knowledge and target the nodes in the learning map. ELM project staff have or will also develop performance tasks and rubrics, as well as objective item sets, for teachers to administer as formative assessments to generate the individual student data they need to address student's individual learning needs. The rubrics and answer keys for these formative assessments will be accompanied by notes about how to interpret student responses in terms of the nodes and connections in the learning maps.

In Spring 2016, staff from the five SEAs recruited English language arts (ELA) and mathematics grades 2-8 teachers to participate in the project for the 2016-17 school year. A total of 43 teachers met the selection criteria and were invited to participate in Cohort 1 (25 ELA teachers and 18 mathematics teachers). The first formal project activity for Cohort 1 participants was a three day workshop in Kansas City held July 6-8. The teachers received training on how to access the online ELM materials and how to use the materials in instruction. The expectation is that following the training, the teachers will continue to explore the ELM online interface and its tools, implement those tools in instruction, and complete feedback surveys at the conclusion of each instructional unit. ELM staff will provide ongoing support through the school year as the teachers implement the ELM resources.

At the conclusion of the July training, an evaluation survey was administered by a McREL evaluator the third-party evaluator for the ELM project. The survey was completed by 43 participants for a response rate of 100%. This brief report begins with a description of the survey and data analysis procedures employed. Following that is a summary of findings.

Survey Overview and Analysis

The training evaluation survey consisted of three parts: an evaluation of the ELM training, ELM system usability, and a set of four open-ended items. The training evaluation portion of the survey consisted of 31 items in seven categories (e.g., facilitator quality; materials; practical and environmental issues; objectives; content; outcomes; and quality, relevance, and utility). The selected-response items were rated on a 5-point Likert scale (from 1 = *strongly disagree* to 5 = *strongly agree*); a *not applicable* response option was also available for respondents who believed that the question did not apply to them. Descriptive statistics (percentages, means, and standard deviations) were calculated for each item.

The evaluation of the ELM system used a set of 10 usability survey items, the System Usability Scale (SUS) developed by Digital Equipment Corporation (1986). The items were customized with the insertion of the word "ELM" to aid respondents in understanding what system was being referred. The items used a five point scale where 1 = *strongly disagree* to 5 = *strongly agree*. The SUS yields a single number representing a composite measure of the overall usability of the system being studied. Scores for individual items are not meaningful on their own. To calculate the SUS score, the score contributions from each item were submitted. Each item's score contribution will range from 0 to 4. For items 1, 3, 5, 7, and 9 the score contribution is the scale position minus one. For items 2,4,6,8 and 10, the contribution is five minus the scale position. The sum of the scores is multiplied by 2.5 to obtain the overall value of the system usability. SUS scores have a range of 0 to 100.

Open-ended survey responses were analyzed by question and by theme. Data were segmented into passages through coding. Themes were then identified and summarized by salient and prevalent issues.

Findings

Table 1 displays the descriptive statistics calculated for each survey item. There were several items for which all participants agreed or strongly agreed including that the facilitators were knowledgeable about the subject matter *(M=4.84, SD=0.37)* and encouraged questions and participation (*M=*4.79, *SD=*0.41). Participants also agreed or strongly agreed that the materials were research-based (*M=*4.86, *SD=*0.35). Participants indicated that the knowledge they gained on use of the learning map resources for formative assessment can be incorporated into their teaching (*M=*4.61, *SD=*0.49) and they will incorporate the use of learning map resources into their teaching (*M=*4.61, *SD=*0.45).

Although still rated quite highly, many participants expressed neutrality or disagreement in that the training sessions were adequately paced (*M=*3.77, *SD=*1.02).

Table 1. Evaluation of Training by Item

	n	NA	SD	D	N	A	SA	*M*	*SD*[*]
Facilitator Quality									
The facilitators were knowledgeable about the subject matter.	43	--	--	--	--	16.3%	83.7%	4.84	0.37
The facilitators encouraged questions and participation.	43	--	--	--	--	20.9%	79.1%	4.79	0.41
The facilitators had good presentation skills.	42	--	--	--	9.5%	35.7%	54.8%	4.45	0.67
The facilitators included a variety of learning activities.	43	--	--	7.0%	14.0%	46.5%	32.6%	4.05	0.87
Materials									
Materials were culturally sensitive (free from ethnic, gender, or class biases).	43	2.3%	--	--	7.0%	18.6%	72.1%	4.67	0.61
Materials included diverse viewpoints.	43	--	--	2.3%	20.9%	44.2%	32.6%	4.07	0.80
The topics and materials are relevant to mathematics and/or English language arts educators.	43	--	--	--	2.3%	23.3%	74.4%	4.72	0.50
Materials were research-based.	43	--	--	--	--	14.0%	86.0%	4.86	0.35
Practical and Environmental Issues									
Materials (including visual aids) supported the training goals.	43	--	--	--	2.3%	32.6%	65.1%	4.63	0.54
Pace of the training sessions was adequate.	43	--	2.3%	14.0%	9.3%	53.5%	20.9%	3.77	1.02
Length of the training was adequate.	43	--	--	4.7%	11.6%	58.1%	25.6%	4.05	0.75
Seating was adequate and arranged appropriately for the activities.	43	--	--	2.3%	2.3%	46.5%	48.8%	4.42	0.66
Room temperatures were comfortable.	43	--	2.3%	7.0%	9.3%	51.2%	30.2%	4.00	0.95
The meeting location was accessible.	43	--	--	--	4.7%	27.9%	67.4%	4.63	0.58
Objectives									
Objectives for the training were clear.	43	--	--	--	7.0%	30.2%	62.8%	4.56	0.63
The objectives were accomplished.	43	--	--	--	4.7%	25.6%	69.8%	4.65	0.57
Content									
The training covered the range of topics I expected it to cover.	43	--	--	--	23.3%	25.6%	51.2%	4.28	0.83
The training addressed the topics in sufficient detail.	43	--	--	4.7%	11.6%	46.5%	37.2%	4.16	0.81
The information presented was comprehensive.	43	--	--	--	2.3%	55.8%	41.9%	4.40	0.54
The topics covered in the training were relevant to the ELM project goals.	43	--	--	--	9.3%	32.6%	58.1%	4.49	0.67
Prior to attending this training, I was already knowledgeable about the academic content taught to children that is modeled in the map.	43	--	--	2.3%	7.0%	41.9%	48.8%	4.37	0.72
Outcomes									
The training provided me with information and resources that I can access for future use.	43	--	--	--	4.7%	25.6%	69.8%	4.65	0.57
The training **increased my knowledge of how to use the learning map resources**.	43	--	--	--	2.3%	30.2%	67.4%	4.65	0.53

	n	NA	SD	D	N	A	SA	M	SD^*
The knowledge I gained from examining the learning map resources **can be incorporated into my teaching.**	43	--	--	--	2.3%	32.6%	65.1%	4.63	0.54
I **will incorporate** the use of learning map resources into my teaching.	43	--	--	--	--	39.5%	60.5%	4.61	0.45
The training **increased my knowledge in the use of learning map resources for formative assessment**.	43	--	--	--	7.0%	46.5%	46.5%	4.40	0.62
The knowledge that I gained on use of learning map resources for formative assessment **can be incorporated into my teaching.**	43	--	--	--	--	39.5%	60.5%	4.61	0.49
I will incorporate the use of learning map resources for formative assessment into my teaching.	43	--	--	--	2.3%	37.2%	60.5%	4.58	0.54
The training met my expectations.	43	2.3%	--	--	14.0%	32.6%	51.2%	4.38	0.73
Quality, Relevance, and Utility									
Overall, the information presented was of **high quality** (i.e., grounded in research and best practice, and designed to meet adult learners' needs).	43	--	--	--	4.7%	32.6%	62.8%	4.58	0.59
Overall, the information provided was **useful** (i.e., applicable to my teaching responsibilities).	43	--	--	--	2.3%	32.6%	65.1%	4.63	0.54
Overall, the information and activities were **relevant** (i.e., timely, and worth the time and effort)?	43	--	--	--	4.7%	41.9%	53.5%	4.49	0.59

Note. Percentages may not sum to 100 due to rounding. *NA = not applicable; SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree, M = mean, SD* = standard deviation.*

Table 2 displays the descriptive statistics for the ELM system components. A majority of the participants said they would like to use the ELM software frequently (M=4.30, SD=0.60) and indicated that they found the various functions in the ELM software to be well integrated (M=3.95, SD=0.62).

Although still having overall high mean ratings, a number of participants expressed neutrality or disagreement with the statement that the ELM software was easy to use (M=3.62, SD=0.80). Likewise, participants had similar perceptions in their confidence with using the ELM software (M=3.74, SD=0.76).

The overall SUS score for the 10 usability survey items was 69 on a 100 point scale (see Survey Overview and Analysis section for explanation of score calculation). A score of 69 indicates an above average perception of usability.

Table 2. Evaluation of ELM System by Item

	n	NA	SD	D	N	A	SA	*M*	*SD**
System Components									
1. I think that I would like to use this ELM software frequently.	43	--	--	--	7.0%	55.8%	37.2%	4.30	0.60
2. I found the ELM software unnecessarily complex.	43	--	4.7%	55.8%	18.6%	18.6%	2.3%	2.58	0.93
3. I thought the ELM software was easy to use.	42	--	2.4%	7.1%	21.4%	64.3%	4.8%	3.62	0.80
4. I think I would need the support of a technical person to be able to use the ELM software.	43	--	20.9%	51.2%	20.9%	4.7%	2.3%	2.16	0.90
5. I found the various functions in the ELM software to be well integrated.	43	--	--	2.3%	14.0%	69.8%	14.0%	3.95	0.62
6. I thought there was too much inconsistency in the ELM software.	43	--	20.9%	65.1%	9.3%	2.3%	2.3%	2.00	0.79
7. I would imagine that most people would learn to use the ELM software very quickly.	43	--	2.3%	16.3%	30.2%	44.2%	7.0%	3.37	0.93
8. I found the ELM software very cumbersome to use.	43	--	9.3%	60.5%	23.3%	4.7%	2.3%	2.30	0.80
9. I felt very confident using the ELM software.	43	--	--	7.0%	23.3%	58.1%	11.6%	3.74	0.76
10. I needed to learn a lot of things before I could get going with the ELM system.	43	--	23.3%	48.8%	11.6%	14.0%	2.3%	2.23	1.04

Note. Percentages may not sum to 100 due to rounding. *NA = not applicable; SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree, M = mean, SD* = standard deviation. Items 2, 4, 6, 8, 10 are reverse worded; therefore a lower mean is the more desirable response.*

Participants provided many insightful comments in response to the four open-ended prompts: most useful aspect, least useful aspect, I learned, and appreciation/concerns/suggestions. Their responses are presented in full in Table 3-6.

In general, the participants found the training very helpful. Getting to use the software and exploring the site were mentioned often as the most helpful aspect of the training. The activities at the training and the resources provided were also mentioned repeatedly as important to the participants. Participants found the ELM team and support staff to be very helpful and supportive. Some noted that the time to network and collaborate with other teachers was a valuable aspect to them. A smaller number mentioned that getting the bigger picture and history behind the project was helpful. Lastly, participants found the presenters and speakers, particularly Margaret Heritage, to be an important and helpful part of the training.

Table 3. Open-Ended Evaluation Item: Most Helpful Aspect

Theme	Comments
ELM software and site (n=26)	• The map software and nodes within the map. • Time to navigate the website. • The instructional resources and learning how to use the software. • Time to explore within the software. • How learning maps work. Navigating the site. • The ELM site. • All the ways the learning map can be used. • Using the software and offering feedback about instrumental units. • Playing with/experimenting with the software. • Getting hands on the software. • Instruction on specific aspects of ELM then time to explore and use.

Theme	Comments
	• Getting into the map and getting help navigating the map, resource, etc. • The parent and child nodes are great. • Being able to manipulate the map to zoom in or focus on specific topics or nodes. • Being able to navigate through the maps with people in the room to help. • It was most helpful to be given time to walk through the software and have my questions answered as I worked through the software and program. • Practicing with the maps and the technology support. • Having the opportunity to play around with the ELM system. • I enjoyed having time to explore the maps. • The time spent in the site was the most helpful. • During the session where we were learning to use the ELM software. • Learning how to use the maps software. • Access to the lessons. • Providing us a log-in and allowing us to explore with guidance. • Also teaching us the search bar, without hitting enter. • Learning about the ELM software and how to incorporate it in the classrooms.
Activities and resources (n=11)	• Resources were helpful and thorough activities (hands-on, child appropriate, easy to get to, teacher friendly. • Hands on activities on how to use the map productively. • Resources available were very comprehensive and user friendly. • I love the lessons and I may use them as part of what I am developing in my LMS for my school. • Application to our specific teaching assignment. • Common vocabulary. • Using visuals and having examples. • Visuals – front loading prior to presenter (example: formative assessments). • The variety of resources and rubrics is amazing. • Group activities with grade levels and discussions. • Deep study into formative assessment.
ELM team (n=9)	• The ELM team is very knowledgeable and helpful with learning the software. • The flexibility of the staff to help, to answer questions, and to make us feel comfortable, welcome, and valued. • Helpfulness of project members. Enthusiasm of project members. • Face-to-face time questions answered on the spot. • All of the support people and the team. • Willingness to answer all questions and help. • Friendly team, very helpful. • Having Lindsey and Nicki available was very helpful. They walked around and were able to quickly and effectively answer questions and assist. • The trainers were very respectful and helpful. You could tell they wanted to be there. Thank you!
Collaborating/Networking (n=9)	• The chance to collaborate with other teachers. • Collaborating with other teachers from other states. • Networking with others and learning others point of view. • Collaboration with many teachers from lots of places. • Working in ELA and math groups. • Meeting and collaborating with new teachers outside of my state and district. • The feedback with other teachers. • Being given time to collaborate with other teachers.

Theme	Comments
	• Time spent collaborating with peers.
Bigger picture (n=6)	• The history of the project and how it came about. • Just being able to understand the big picture and overall goals of the project. • Having the standards connected. • I am excited to see the resources area when /as it is being developed. • Mapping of the standards and their connections to other nodes. • That they are all connected and that lessons will be incorporated with the standards.
Presenters/Speakers (n=5)	• Loved Margaret Heritage's presentation on formative assessment. • Speakers were knowledgeable and interesting. • Margaret Heritage was great! • Guest speaker. • The presenters were amazing! Very knowledgeable, friendly, and super helpful.

There was less agreement on the least helpful aspect of the training. The presentation on fractions and purposeful interventions was indicated by many participants as not helpful. The schedule and pace of the training also came up repeatedly, especially that there was a lot of sitting and listening. It was noted that some lessons/standards were not ready yet, which detracted from the training. This was particularly frustrating for participants who were unable to work with or see lessons for their grade level. Several participants mentioned that they would have benefited from more information up front so as to be better prepared for what the training was and what they were supposed to get out of it. Additionally, there were a variety of aspects that individual participants mentioned as unhelpful, including more time on the software, teaching practices, and filling out forms at the training.

Table 4. Open-Ended Evaluation Item: Least Helpful Aspect

Theme	Comments
Fractions/purposeful interventions presentation (n=11)	• Presentation about fractions via the internet. I didn't understand how it fit into the training. • The presentation about fractions. • The math presentation about fractions was out of place. • The presentation on the fractions interventions was not helpful. As ELA, I was completely lost and bored. • The math expert via Skype. • The presentation involving fractions. It just didn't seem to fit. • The purposeful intervention speaker was probably the least helpful presentation during our time here. It just didn't seem to fit as well which was disappointing because the title of the presentation was intriguing. • The purposeful interventions speaker was not particularly productive to the learning goals of the training. • Purposeful interventions presentation. • For me the sessions on interventions was not very helpful. I don't do specific interventions for RTI, as we have a full time person that does that. • Purposeful interventions presentation on Thursday morning – felt like a sales pitch and didn't gain new knowledge.
Schedule and pace (n=6)	• Wednesday's training was slow and I felt like we could have learned more. • There was a lot of down-time and sitting. I would have like more discussion or active learning. Adults learn just like students! • There was a little too much dead time between presentations. • More moving and talking time during long seating periods. • A lot of sitting and listening.

Theme	Comments
	• I would have liked more hands on and time to just explore.
Lack of lessons/resources (n=6)	• Not having all the lessons available yet • It would have been helpful to have more lessons complete to get with your grade level and dive in to see what's going to work. • I was hoping for more resources for classroom use. • Once all the lessons are loaded it will be helpful. • I wanted to see more standards live and ready to explore. • Not being able to see how a teacher may/could/has used the ELM system in lesson planning or with their classroom
Unprepared (n=4)	• I felt completely unprepared for what I was getting into – not enough front-loading before we arrived. However, I think this will be better for next year's group. • I did not completely understand the concept until late in the afternoon training on the second day. Even then I was a bit lost. • Intense start to the map nodes, would help to walk us through that more. • I read the emails but felt a little uncertain of our direction prior to the first day.
Problems with grade level (n=3)	• It was not as helpful to spend time looking at grade level materials well above my own. However, I know this is only because that's what is available right now and I had to think of something to write here. • Not being able to look at lessons for my grade. • I think if we were divided up more into grade specific groups earlier, that it would be more beneficial to each group.
General (n=6)	• Teaching practices – only because I'm already well-schooled the resources we used. It was great for the variety of teaching styles at this workshop. • Still kinks that needed to be worked out for everything (tech to work accurately). • I would have loved a lot more time on the software and perhaps some scenarios that we could practice using the maps in order to feel more confident in its use. • MO state rep should have met with MO participants. • I felt that every minute was well used and all information was very relevant and helpful. • Filling out forms during the conference prefer to take them home and fill out things and return them, thereby cutting the conference time.

In response to the 'I learned' prompt, a number of participants noted that they learned quite a bit about formative assessment, both alone and related to ELM. Many participants also expressed that they had learned about ELM – the concept, the software, the website. Responses ranged from [I learned] "what learning maps are" to "how to use the map software to integrate it with instruction" to "how to navigate the site and get access to resources." Several participants wrote they learned instructional practices that they plan on taking back to their classroom, including questioning techniques and lessons. Multiple participants noted that there was simply "lots" of information in the training.

Table 5. Open-Ended Evaluation Item: I learned

Theme	Comments
Formative assessment (n=26)	• Importance of formative assessment. • Reaffirmed the importance of formative assessment. • How to use the map software to integrate it with instruction and formative assessment. • I also learned questioning techniques and formative assessment. • Students being a part of the formative assessment process. • More about formative and often assessment. • How formative assessment is tied to the learning maps. • I do use formative assessment daily with my students now. I have resources to preplan and reflect that I can use! Thank you! • About formative assessment and how to use the maps to design my instruction. • I learned how the learning maps can guide my instruction and differentiation in the area of math and ELA to meet student needs and guide formative assessment. • How to be more effective as a teachers and using my formative assessments to keep students accountable and a way to comminute easier to the parents about where their child is. • Formative assessment. • More about formative assessment. • Importance of formative assessment. • Reaffirmed the importance of formative assessment. • How to use the map software to integrate it with instruction and formative assessment. • I also learned questioning techniques and formative assessment. • Students being a part of the formative assessment process. • More about formative and often assessment. • How formative assessment is tied to the learning maps. • I do use formative assessment daily with my students now. I have resources to preplan and reflect that I can use! Thank you! • About formative assessment and how to use the maps to design my instruction. • I learned how the learning maps can guide my instruction and differentiation in the area of math and ELA to meet student needs and guide formative assessment. • How to be more effective as a teacher and using my formative assessments to keep students accountable and a way to communicate easier to the parents about where their child is. • Formative assessment. • More about formative assessment.

Theme	Comments
Using the maps, software, and website (n=23)	• How to use the map software to integrate it with instruction and formative assessment. • How to use the map model and how to access the instructional resources. • Software use. Getting to resources. Great teacher notes. • How to navigate the website and maps. • How to use the MAPs and resources. • A new exciting way to individualize my instruction. A new way of allowing my students to take ownership in their learning. • How to find resources. • How to implement ELM in my classroom. • I learned what an enhanced map was and how to use it. • How to navigate forward and backwards in the ELM system. • Scope and sequence with in a domain. • I learned how to navigate the site and get access to the resources. • How to use the maps. • That there are resources available. • I learned how the learning maps can guide my instruction and differentiation in the area of math and ELA to meet student needs and guide formative assessment. • How to navigate and personalize the learning maps for my own needs. • How to use the maps. • A great deal about ELM – using, making, navigating, looking in a useful way, tying to formative assessment, intervention differentiation. • All about learning maps! • How to use the maps to design my instruction. • What learning maps are. • A great deal about learning progressions and the process used to develop these learning maps. • Different uses for the maps in my classroom.
Instructional practices (n=8)	• More about how I need to build up to standards. • I also learned questioning techniques. • More about the power of mathematics discourse and how to incorporate this into my classroom. • How to start analyzing knowledge gaps and what to do to fix those. • Different lessons to use within my subject content. • I learned new ideas from other teachers that I will be able to use in my classroom. • Tying objectives and goals all together is easy! • I loved the guided questions – they are so much better than what I use.
Other specific features (6)	• How to search for the nodes. • Parent vs. children in regards to the ELM system. • What a node is, what a 'parent' and 'child' are. • What nodes are. • I really liked the +/- features to show the progression of the learning and how that will be helpful to me. Thank you. • Easy way to view the standards crosswalk and use them appropriately.

Theme	Comments
General (n=10)	• I learned so much about how skills are interconnected within grade levels and across grade levels. I feel it's filled in many gaps in my own education and in my teaching.
	• So much! I can't wait to incorporate ELM in my classroom.
	• Progression of growth within standards.
	• So much
	• Lots!
	• More about many connections there are among all the thousands of learning topics.
	• The maps really help me see the recipes of learning needs that make-up the target skills students are aiming for.
	• The connections we make with other that share our same passions and interests is always a favorite part of any conference for me. There connections are invaluable!
	• Lots!
	• So much information.

In the final prompt, Appreciation/Concerns/Suggestions, participants covered a wide range of topics. There were many comments thanking the organizers and specifically the ELM team and the guest speaker. A major theme in the suggestions was to change the schedule in various ways. Participants also offered a variety of other suggestions, such as making brochures available, modeling the software in a classroom setting, and having lesson for each grade level. The participants had both positive (i.e. good service) and negative (i.e. no place for networking, bad internet) things to say about the hotel but only positive comments about the food. Several participants specifically said that they liked/enjoyed the training. The overall tenor of the comments was quite positive.

Table 6. Open-Ended Evaluation Item: Appreciations/Concerns/Suggestions

Theme	Comments
Food/Accommodations (n=12)	• Hotel and services were wonderful!
	• Food/lodging/travel was well taken care of.
	• Hotel, food, travel was wonderful!
	• Look for a venue with adequate/better internet.
	• Meet at a different hotel where we can sit and collaborate after the day of training. Closer to gas stations, etc.
	• Room was cold on Thursday, otherwise fine.
	• Hotel – being closer to attractions/shopping/gas station.
	• A hotel that has happy hour so us teachers can collaborate together.
	• Hotel, food, travel was wonderful!
	• Delicious, well-balanced meals.
	• The food selection was fabulous. I never felt hungry or needed to get my own snacks throughout the day.
	• Food was great!
Schedule suggestions (n=9)	• Rearrange schedule – day 1 full day, day 3 half day.
	• I would rather have the 1st day be a full day and get out earlier the last day.
	• Length of training: I thought the same content could have been presented in less time. I also realized that for a credit, the amount of time is set.
	• Next year maybe 2 full days then the ½ day. We are tired by the end of the week!
	• Schedules were nice, but 1st day could probably be shorter.
	• I could have moved faster through the tech piece – maybe some differentiation?
	• I would encourage you to just get started next year. I was really excited to get started but felt we could get started. I wish we had the introduction on Wednesday, then divided right in on Thursday morning.
	• Diving into ELM sooner to review activities that were already created.

Theme	Comments
	• Keep the dinner, shopping, T-bone game, activities – great team builders.
Quality/usefulness of training (n=9)	• Wonderful training! • I enjoyed the training and now can see myself using the maps. • I thought it was a great training and I am excited to use the technology and learn more. • Everyone did an amazing job at the training. • Great training! • Enjoyed learning more about the learning maps! • Very thought out concept. • This was awesome! • Great training! Can't wait to dig in!
Other suggestions (n=8)	• I would have liked to log into and become familiar with the software early in the training and listen to the information/professional development on formative assessment, etc. afterwards. That way we could better understand how to use the software in relation to formative assessments. • More time/model using it in a classroom so I know what is expected when I do it. • Please make the brochures available to print for when I need more! • Please remember to communicate with us! We like to know what's going on! • Make sure lessons are ready to navigate at each grade level. • Some kind of diagnostic to place students for introduction would be helpful then use as a formative from there. • An idea that may be too ambitious: create assessments with questions specifically aligned with nodes that show which nodes students are struggling with. • I did not fully know what I was supposed to get out of this until the end of 1st/beginning of 2nd day. I was very lost for most of the training. I also lost interest throughout the training. I suggest more hands-on and movement to get teachers involved more. Also, maybe sample work to look at and evaluate.
Team/presenters/staff (n=6)	• I appreciate how knowledgeable patient and approachable all of the project staff were. They were so kind in all the help they provided. • The presenters were thoughtful and kind. • Guest speakers were great (especially Margaret Heritage). • I loved our speaker Margaret Heritage – she was a special treat to hear. • Presenters were approachable and knowledgeable. • Your patience and thoughtful approach to every question and comment was much appreciated as well as your appreciative spirit, passion, and enthusiasm.
Thank you! (n=6)	• Thank you for all your time and work to help us become better in our classrooms! • You all did an amazing job planning this and making sure our time was valued! You are good hosts. • I appreciate all the time that has gone into the development of ELM and the training. • When will next summer 2017 training be? Thank you for the hospitality, conversation, genuine listening to our questions and feedback. • I appreciate the amount of time, money, effort, and energy that was put into this project, truly a work of ingenuity and collaboration. • Everyone did an amazing job at the training. Thank you for being so organized!
General (n=8)	• I appreciate the staff giving the one teacher who was having trouble their individual time so as not to waste everyone's time. • I appreciate the passion and the authentic manner of speaking about this being a work in progress. • I loved the table that was made on the feedback solutions – great questions and visuals. • I appreciated the time to connect with other teachers. Always so valuable. • I will be excited to have more resources available to use.

Theme	Comments
	• I feel that there were a lot of unknowns in the ground floor research. Next year's training I feel will be made more valuable because of active participation with the system. I feel like the presenter were knowledgeable and very excited to be sharing this experience and they are looking forward to the end results. • I'm looking forward to coming back next year! • I anticipate more lessons to help my determination if this will be an easy thing to use.

Participant responses to both the scored and open ended questions show that they learned from and enjoyed the training. They were impressed with the quality, knowledge, and professionalism of the ELM team. Of particular importance, they indicated that they learned how to integrate learning maps into their teaching and planned to do so. The overall usability score of the ELM system (SUS = 69 on a scale of 0 to 100) is above average. However, there are some particular aspects where attention could be given to improve usability. For example, participants expressed that they felt they would need technical help to be able to use the software correctly. Usability is likely to improve as feedback is incorporated. The fact that participants liked the concept and want to use it in their classrooms is an encouraging result from the Cohort 1 initial training.