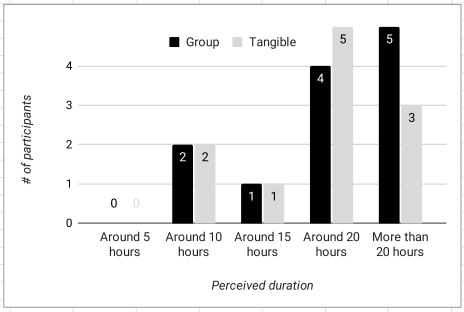
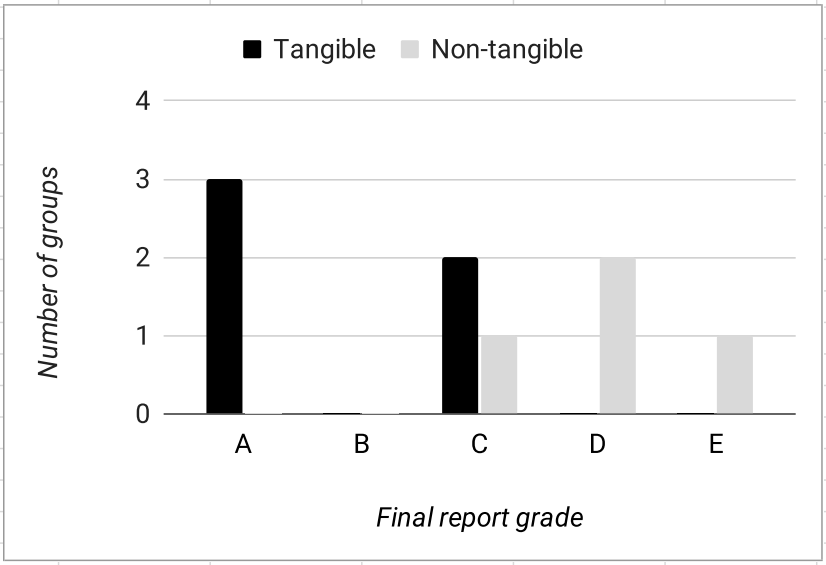
Group	Agreement		Difficulty		Time										Grade		counts
	Average	St Dev	Average	St dev	Around 5 hours		Around 10 hours		Around 15 hours		Around 20 hours		More than 20 hours		Average	StDev	
Tangible	3.83	1.03	3.08	1.08	*0*	*0.00%*	*2*	*16.67%*	*1*	*8.33%*	*4*	*33.33%*	*5*	*41.67%*	*8.764705882*	*4.002225165*	*12*
Non-tangible	3.91	0.54	3.55	0.82	*0*	*0.00%*	*2*	*18.18%*	*1*	*9.09%*	*5*	*45.45%*	*3*	*27.27%*	*8.15*	*3.866620951*	*11*
Improvement of tangible:	**-1.94%**		**-13.03%**			**#DIV/0!**		**-8.33%**		**-8.33%**		**-26.67%**		**52.78%**	**7.54%**		



			MEASURED				OBSERVERED			
Group	**Anonimized group**	**Tangible**	**Grade - assignment**	**Grade - exam**	**Semantic quality**	**Syntactic quality**	**Pace**		**Collaboration**	
			[A-F]	**[1-10]**	**[1(poor) - 5 (excelle**	**[1(poor) - 5 (excellent**	**L/LM/M/MH/H**	**[1-5]**	**L/LM/M/MH/H**	**[1-5]**
	D	Y	A		5	4	high	5	high	5
	C	Y	C		4	4	high	5	medium-high	4
	B	Y	C-		3	3	low	1	medium-low	2
	A	Y	C		4	4	high	5	high	5
	E	N	C		4	5	medium	3	medium-high	4
	F	N	[E]		4	4	medium-low	2	medium	3
	G	N	D		3	4	medium-high	4	low	1
	H	N	D		3	4	medium-low	3	medium	3
tangible					**4**	**3.75**		**4**		**4**
	stdev				0.82	0.50		2.00		1.41
virtual					**3.5**	**4.25**		**3**		**2.75**
	stdev				0.5773502692	0.5		0.8164965		1.258305
Improvement of tangible:					**14.29%**	**-11.76%**		**33.33%**		**45.45%**

	A	B	C	D	E	F
Tangible	3	0	2	0	0	0
Non-tangible	0	0	1	2	1	0



Timestamp	How difficult was it to create the problem, goal, concept and process models?		Please indicate the total amount of time you spent to build the problem, goal, concept and process models?		How much do you agree with the final version of the models?		What was your group number	NOTES	Tang?
3/18/2016 11:05:26	2	we had a lot of freedom to fill in the blanks. With a bit of practical modeling expierence it wasn't so hard to fill in the blanks with standard BP processes etc.	More than 20 hours.	we discussed the items we put up a lot!! Probably more then necessary and we all worked on all models together. We didn't split up the work	4	we discussed a lot and came to the best overall conclusion I think.	Group 1		y
3/18/2016 11:21:33	4	Lack of proper data from the case led us to different assumptions and ideas for structuring the models. This took some time, but at least we had cookies to nibble on during the long meetings.	Around 10 hours	See previous written answer	4	The BPM is not following entirely the guidelines for 4EM modelling and some connections probably don't make much sense but, what's done is done.	Group 1		y
3/18/2016 15:55:32	3	Was because it was my first time creating these models.	More than 20 hours.	Because we did not want to make a mistake.	5	We did everything together so my ideas and opinions where reflected in the model same with my group mate	Group 1		y
3/20/2016 15:27:39	5		More than 20 hours.		4		Group 1		y
3/18/2016 12:21:55	2		Around 20 hours		3		Group 2		y
3/19/2016 9:19:01	3	Difficulty to clearly see difference between goals/change needs. As IT, difficulty to slearly understand KYS process	Around 20 hours	Meeting to discuss about models. Make and update models	4		Group 2		y
3/20/2016 19:47:43	4		Around 20 hours		5		Group 3		
3/21/2016 13:18:12	4		Around 10 hours		4		Group 3		
3/18/2016 13:32:01	1	There was no group 4 option, so I took number 3. I have several years of experience on Business Modeling Consultancy for large corporations "we use our proprietary methodology".	Around 10 hours	Because I had a clear idea on what to do and how to do it, but I need time to remember some of the old ways to do things and try to applied the proposed methodology.	1	I have to let my team members be an active part of what we were doing and let them take decisions, the methodology we were supposed to use is not up to date. Regarding the course the teacher's guidance was vague.	*Group 4*	Changed Group from 3 to	y
3/24/2016 11:37:39	3		Around 20 hours		4		Group 4		
3/28/2016 16:11:53	4	no clear guidelines	Around 20 hours		4		Group 4		
3/18/2016 13:10:21	4		Around 20 hours		4		Group 5		
3/18/2016 13:15:25	3	new course and new experience	Around 20 hours	new subject we should investigate	4	we did hard to submit a perfect version	Group 5		
3/19/2016 23:08:25	5	Have limited information about business and process, it required time to read about it but familiar with workflow charts.	More than 20 hours.	Have limited information about business and process, it required time to read about it.	4	After fighting finally we decide this is final version but still we have some doubts may be due totally IT background and have little amount of business knowledge	Group 5		
3/25/2016 15:43:57	3		Around 20 hours		4		Group 5		
3/30/2016 9:47:16	4		More than 20 hours.		4		Group 5		
3/18/2016 10:59:43	2		Around 15 hours		4		Group 6		
3/18/2016 11:26:11	3	I think some part was complicated and needed to study more.	More than 20 hours.	I need to clarify the case study and then find the problem and goals then draw correct diagram.	4	We follow the book structure.	Group 6		
3/25/2016 1:52:08	4		Around 20 hours		3	It was understandable from the documents but re	Group 8		
3/26/2016 2:48:16	3		Around 10 hours		3		Group 8		
3/18/2016 11:09:34	3	To hard part was to filter the information we needed to put in the models. To actually made the model with those information was easy Also the plastic sheet modeling was kind of useless. It looked easier at first but at the end we all end up working on the digital version of the models because the plastic sheet thing was really annoying to manipulate	Around 15 hours	we meet 1-2 time a week (maybe more in some weeks) for around 3 hours every time	5	It was good models in my opinion	Group 9		y
3/18/2016 11:24:26	4	Overlapp of content and terms of the different models, case study was very often vague and and had too much space for interpretation	More than 20 hours.	We met at least two times per week, over the whole working process. And spend often the whole afternoon together.	4	Its impossible to find a perfect solution or to agree in a group with several members 100%.	Group 9		y
3/19/2016 0:49:19	3	The creation of the Problem and goal models took most of the time afterwards it was therefore easier to create the concept and business process model	More than 20 hours.	Continuous re-arrangements of models and categorization, linking of the sub-models	4	A consensus had to be found within the group and lead to a sometimes compromised version of models. Overall acceptance of models	Group 9		y
									#DIV/0!

Timestamp	How difficult was it to create the problem, goal, concept and process models?	Why?	Please indicate the total amount of time you spent to build the problem, goal, concept and process models?	Why?	How much do you agree with the final version of the models?	Why?	What was your group number	NOTES	Tang?
42447.4621	2	we had a lot of freedom to fill in the blanks. With a bit of p	More than 20 hours.	we discussed the items we put up a l	4	we discussed a l	Group 1		
42447.47329	4	Lack of proper data from the case led us to different assu	Around 10 hours	See previous written answer	4	The BPM is not fi	Group 1		
42447.66357	3	Was because it was my first time creating these models.	More than 20 hours.	Because we did not want to make a r	5	We did everythin	Group 1		
42449.6442	5		More than 20 hours.		4		Group 1		
42447.51522	2		Around 20 hours		3		Group 2		
42448.38821	3	Difficulty to clearly see difference between goals/change	Around 20 hours	Meeting to discuss about models. Ma	4		Group 2		
42447.56389	1	There was no group 4 option, so I took number 3. I have several years of experience on Business Modeling	Around 10 hours	Because I had a clear idea on what t	1	I have to let my t	Group 4	Changed Group from 3 to 4	
42453.48448	3		Around 20 hours		4		Group 4		
42457.67492	4	no clear guidelines	Around 20 hours		4		Group 4		
42447.46497	3	To hard part was to filter the information we needed to pu Also the plastic sheet modeling was kind of useless. It loc	Around 15 hours	we meet 1-2 time a week (maybe mo	5	It was good mod	Group 9		
42447.4753	4	Overlapp of content and terms of the different models, ca	More than 20 hours.	We met at least two times per week,	4	Its impossible to	Group 9		
42448.03425	3	The creation of the Problem and goal models took most o	More than 20 hours.	Continuous re-arrangements of mod	4	A consensus had	Group 9		
Average	**3.083333333**				**3.833333333**				

Timestamp	How difficult was it to create the problem, goal, concept and process models?	Why?	Please indicate the total amount of time you spent to build the problem, goal, concept and process models?	Why?	How much do you agree with the final version of the models?	Why?	What was your group number	NOTES	Tang?
42449.82481	4		Around 20 hours		5		Group 3		
42450.5543	4		Around 10 hours		4		Group 3		
42447.54886	4		Around 20 hours		4		Group 5		
42447.55237	3	new course and new experience	Around 20 hours	new subject we should investigate	4	we did hard to submit a perfect version	Group 5		
42448.96418	5	Have limited information about business and process, it r	More than 20 hours.	Have limited information about busin	4	After fighting finally we decide this is final version but still we have some doubt	Group 5		
42454.65552	3		Around 20 hours		4		Group 5		
42459.40783	4		More than 20 hours.		4		Group 5		
42447.45813	2		Around 15 hours		4		Group 6		
42447.47652	3	I think some part was complicated and needed to study n	More than 20 hours.	I need to clarify the case study and th	4	We follow the book structure.	Group 6		
42454.07787	4		Around 20 hours		3	It was understandable from the documents but real time senarios had to be ma	Group 8		
42455.11685	3		Around 10 hours		3		Group 8		
Average	**3.545454545**				**3.909090909**				

Anonimized group r	Group type	School	Q1	Q3		SUM (Q1+Q3)
F	non-tangible	JIBS	3	7		10
A	tangible	JIBS	5	10		15
G	non-tangible	JIBS	3	0		3
A	tangible	JIBS	5	7		12
A	tangible	JIBS	5	7		12
A	tangible	JIBS	3	8		11
G	non-tangible	JIBS	3	8		11
B	tangible	JIBS	2	6		8
D	tangible	JIBS	2	2		4
C	tangible	JIBS	4	4		8
F	non-tangible	JIBS	3	8		11
E	non-tangible	JIBS	5	7		12
D	tangible	JIBS	5	7		12
D	tangible	JIBS	0	0		0
E	non-tangible	JIBS	3	2		5
B	tangible	JIBS	4	2		6
D	tangible	JIBS	4	7		11
F	non-tangible	JTH	2.5	5		7.5
F	non-tangible	JTH	3	6		9
G	non-tangible	JTH	2.5	0		2.5
C	tangible	JTH	3.5	7		10.5
B	tangible	JTH	5	8		13
E	non-tangible	JTH	3.5	7		10.5
D	tangible	JTH	0	0		0
B	tangible	JTH	2.5	6		8.5
A	tangible	JTH	0	6		6
C	tangible	JTH	5	7		12