

Evaluation Report For FDP Design Activity on Peer Instruction

FDP301x: Design Evaluation Report

Work done as part of AICTE approved FDP on IIT-BombayX: FDP301x Mentoring Educators in Educational Technology, Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (PMMM-NMTT), MHRD, GoI May 17th, 2018 to June 27th, 2018

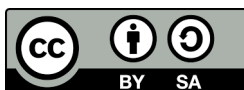
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Section 1

1ANALYSIS OF ENGAGEMENT

1.1 Background

This evaluation report is prepared in LaTeX [1, 4]. The FDP Design Activity is prepared on WordPress Topic in Moodle [5]. It is a part of assignment of workshop “Mentoring Educators in Educational Technology - FDP301x, Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (PMMMNTT), MHRD, GoI, May 17th, 2018 to June 27th, 2018”

The MOODLE course using MoodleCloud [2] on WordPress [6] was designed as part of a blended course which was to be taken by participants of FDP301x [3] IITBombayX: FDP301x Mentoring Educators in Educational Technology.

1.2 What was the gross engagement in the course? [Macro level]

Around 13 participants from FDP301x have also registered for the course. The course involved the following activities that were to be completed by participants during the duration of the course:

- LeDs on PI- 5 Nos
- LbDs on PI- 5 Nos
- Discussion on Peer Instruction
- Reflection Quiz (RQ)
- Advancing Your Learning (Lxt) - 3 Videos and Resources
- Assimilation Quiz (AQ)
- Knowledge Quiz (KQ)
- Course Entry Survey

Table 1.1: Activity Completion Summary and Attempt by Participants

	Activity	Attempt by Participant
LeDs	1	9
	2	8
	3	8
	4	8
	5	8
LbDs	1	9
	2	8
	3	8
	4	8
	5	8
	RQ	9
	AQ	10
	KQ	10
	LxI	7
	Quiz on LxI	6
	Course Entry Survey	8
	Course Feedback	7

- Evaluation and Feedback

The activity completion report generated from the course Reports section shows the engagement of participants in the activities as shown in Table 1.1.

1.3 What was the engagement pattern of individual LeDs, LbDs, LxIs, and LxTs? [Micro Level]

Looking into the performance and engagement of individuals in the course activities, following is the engagement pattern of selected participants in the course. Three participants were selected for the analysis so that we have a sample groups showing high engagement, medium engagement and low engagement pattern. Table 1.2 shows the level of engagement of the three sampled participants in the course.

1.4 What is the transition pattern of engagement of learners across LeD, LbD, LxI, and LxT?

The user grade item and range is given in Figure 1.2 and the grade item and participant is given in Figure 1.3.

Table 1.2: Participation of individual learners in the course

Activity	Participant 1	Participant 2	Participant 3	
LeDs	1	Yes	Yes	Yes
	2	Yes	Yes	Yes
	3	Yes	Yes	Yes
	4	Yes	Yes	Yes
	5	Yes	Yes	Yes
LbDs	1	Yes	Yes	Yes
	2	Yes	Yes	Yes
	3	Yes	Yes	Yes
	4	Yes	Yes	Yes
	5	Yes	Yes	Yes
RQ	Yes	Yes	Yes	
AQ	Yes	Yes	Yes	
KQ	Yes	Yes	Yes	
LxI	Yes	Yes	No	
Quiz on LxI	Yes	No	No	
Course Entry Survey	No	Yes	No	
Course Feedback	Yes	Yes	No	

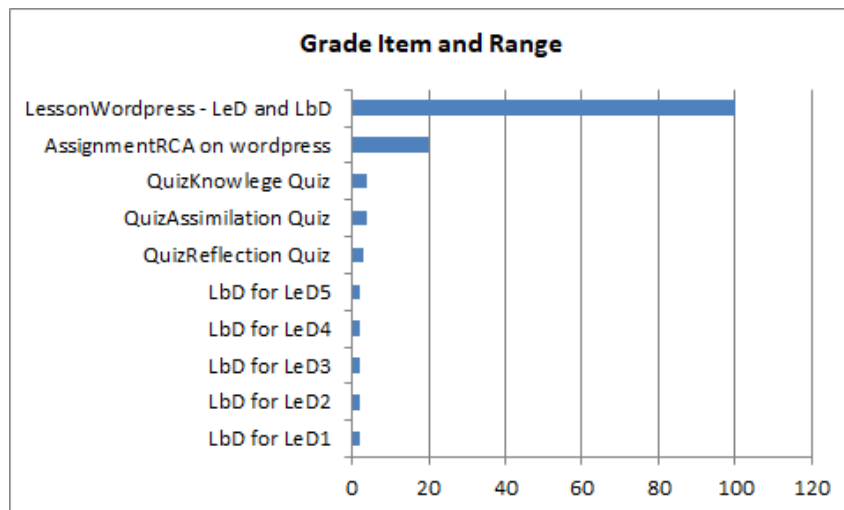


Figure 1.1: User grade item and range

Figure 1.2: User grade item and range

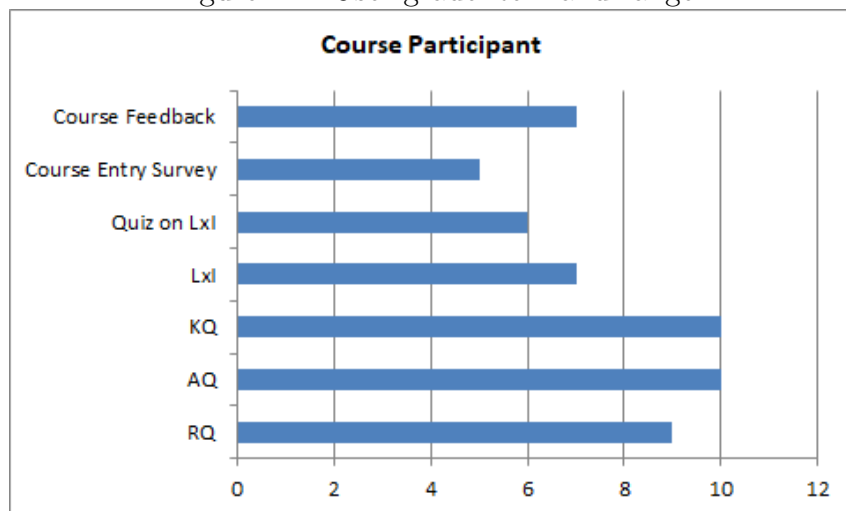


Figure 1.3: Grade item and participant

Section 2

ANALYSIS OF LEARNING

2.1 What is the gross learning in the course?[Macro]

Analysis of the learning of the students is done by analysing the marks obtained by the participants in attempting various quizzes and activities. There were five types of quizzes and activities for the participants. The weighted marks for each of them is given in this Section. There are five graded activities with total score of 100%

1. Knowledge quizzes (KQ): 25% Assessing the knowledge gained by learning content.
2. Assimilation quizzes (AQ): 10% Learning extension resources – 10%
3. Reflection quizzes (RQ): 5% Discussion forum
4. Resource creation assignments (RCA): 25% Ceating resources using the ICT reviewed – 15%
5. LbD and LeD Creation Assignemnts: 10%

Participant should note the following:

1. Minimum score to qualify: 50%
2. One mark per question
3. 50% score is passing
4. No negative marking

Also the grade letter are given in Table 2.1.

The number of participants who attempted each activity and the average, marks and percentage they scored is given in Table 2.2.

The number of participants who have attempted each LbDs. The total is calculated in 4 as it was the weightage given to the LbDs in the whole course scoring. It given in Table 2.3.

Table 2.1: Number of participants who attempted each activity and the average, marks and percentage they scored

Highest	Lowest	Letter
100.00 %	93.00 %	A
92.99 %	90.00 %	A-
89.99 %	87.00 %	B+
86.99 %	83.00 %	B
82.99 %	80.00 %	B-
79.99 %	77.00 %	C+
76.99 %	73.00 %	C
72.99 %	70.00 %	C-
69.99 %	67.00 %	D+
66.99 %	60.00 %	D
59.99 %	0.00 %	F

Table 2.2: Number of participants who attempted each activity and the average, marks and percentage they scored

Course Activity	LbDs	RQ	AQ	KQ	Activity	Any	All
No of persons attempted	5	9	9	9	-	-	13
Average Marks	3.02	1.67	2.67	2.9	-	-	11.9
Maximum Marks	4	3	4	4	20	100	100
Average Percentage	75.5	55.67	66.75	72.5	-	-	59.5

Table 2.3: Number of participants who have attempted each LbDs

LbD Number	LbD 1	LbD 2	LbD 3	LbD 4	LbD 5	All of the LbDs
No of persons attempted	9	8	8	8	8	5
Average Marks	1.29	1.8	1.93	1.64	1	3.02
Maximum Marks	2	2	2	2	2	4
Average Percentage	64.5	90	96.5	82	50	75.5

Table 2.4: The list of quizzes and the attempts by user

Quiz	Attempts
LbD 1	10
LbD 2	9
LbD 3	10
LbD 4	8
LbD 5	11
RQ	11
AQ	11
KQ	11
Discussion Forum Team 061-wordpress	2
Learning Experience Interaction (LxI) Forum	1

Table 2.5: FDP activities with its weights and maximum grades

Course Activity	Weights	Max grade
LbD 1	4.878	2
LbD 2	4.878	2
LbD 3	4.878	2
LbD 4	4.878	2
LbD 5	4.878	2
RQ	7.317	3
AQ	9.756	4
KQ	9.756	4
RCA on wordpress	48.78	20
Wordpress - LeD and LbD	0.001	100

2.2 What is the learning pattern across LbDs and Quizzes? [Micro]

The list of quizzes and the attempts by user are given in Table 2.4.

FDP activities with its weights and maximum grades is given in Table 2.5.

The transition pattern of learning across Learning by Doing (LbD) using Learning Dialogue (LeD) is given in Figure 2.1 and Figure 2.2.

The transition pattern of learning across Learning using Knowledge Quiz (KQ), Reflection Quiz(RQ) and Assimilation Quiz(AQ) is given in Figure 2.3.

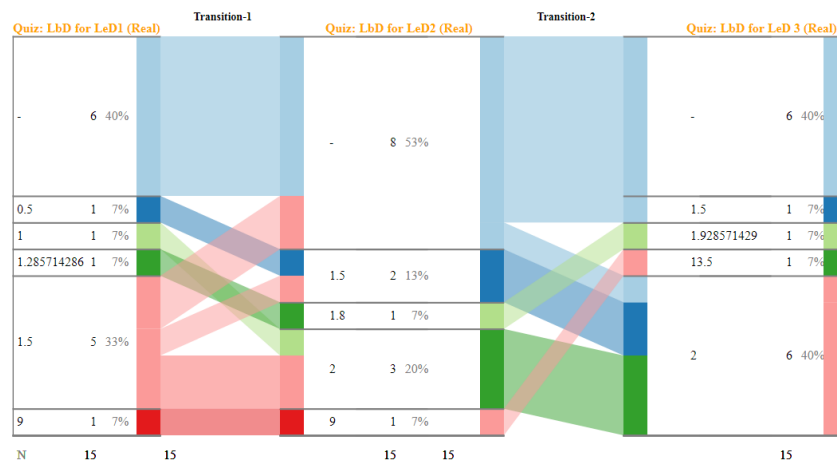


Figure 2.1: The transition pattern of learning across Learning by Doing (LbD): LbD 1, LbD 2 and LbD 3

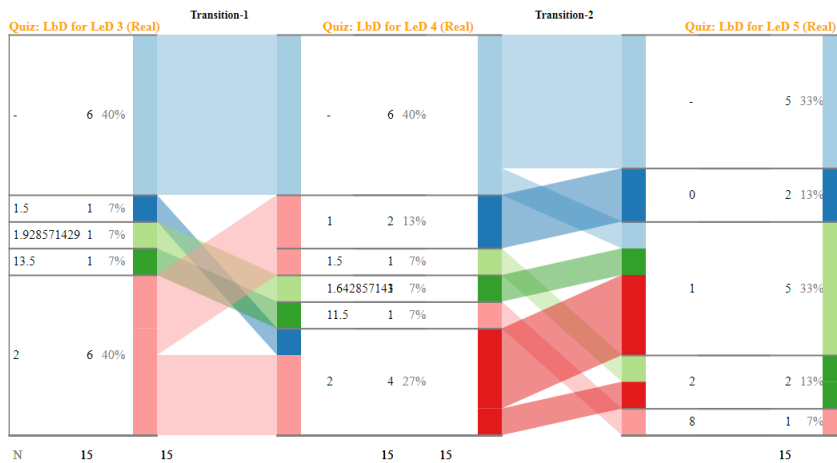


Figure 2.2: The transition pattern of learning across Learning by Doing (LbD): LbD 3, LbD 4 and LbD 5

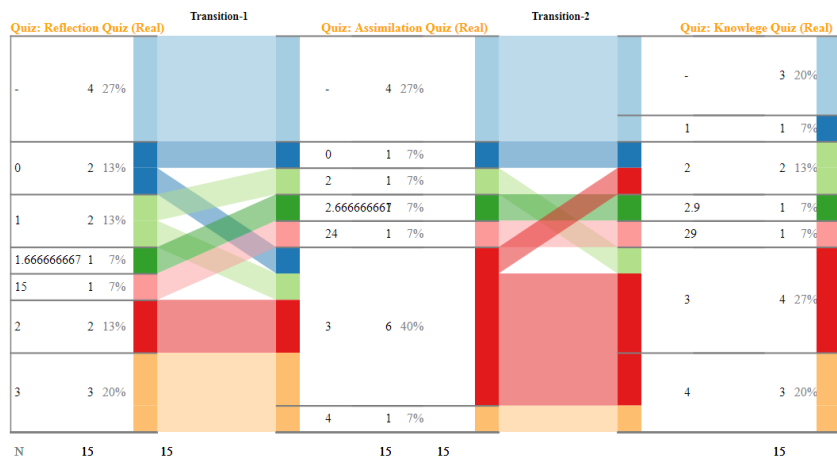


Figure 2.3: The transition pattern of learning across Learning using Knowledge Quiz (KQ), Reflection Quiz(RQ) and Assimilation Quiz(AQ)

Section 3

3ANALYSIS OF PERCEPTION

3.1 What was the perception of learners about the course? [Macro]

The overall perception of learners is analyzed through their feedback in the three surveys:

- Perception of Learning
- Perception of Engagement
- Perception of Usability

3.1.1 Perception of Learning

From perception of learning analysis, the participants seem to have a good perception about the learning offered by the course.

Talking about the learning avenue offered by additional resources/reference materials, some of the learners are neutral about their learning potential. This suggests the need to have a fresh look at the materials and check if they really offer in-depth knowledge of the topic.

We have taken survey. A summary of your results compared to the class averages is given in Figure 3.1. 10 out of 13 users have completed this survey so far.

3.1.2 Perception of Engagement

It is clearly evident that the perception of engagement has been low (see 4.1. However one positive aspect are the quizzes/activities. From Figure 3.2 and Figure 3.3 it can be observed that although the opinion about engagement is diverse, a good number of learners find the quizzes/activities mildly engaging.

3.1.3 Perception of Usability

The visual summary (see Figure 3.4) of the survey responses of participants. From the graph, we can analyse each of the 6 categories used to evaluate the usability. Going by the bar graphs, we can see that most of the Usability of participants are often mostly.

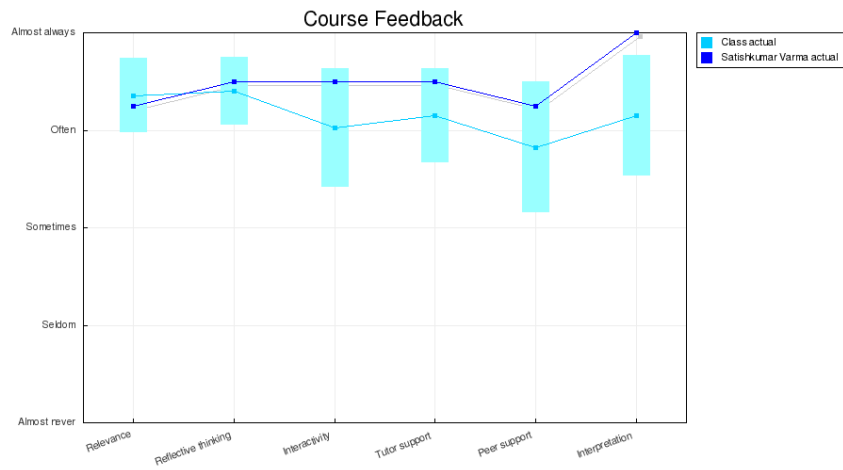


Figure 3.1: A summary of your results compared to the class averages

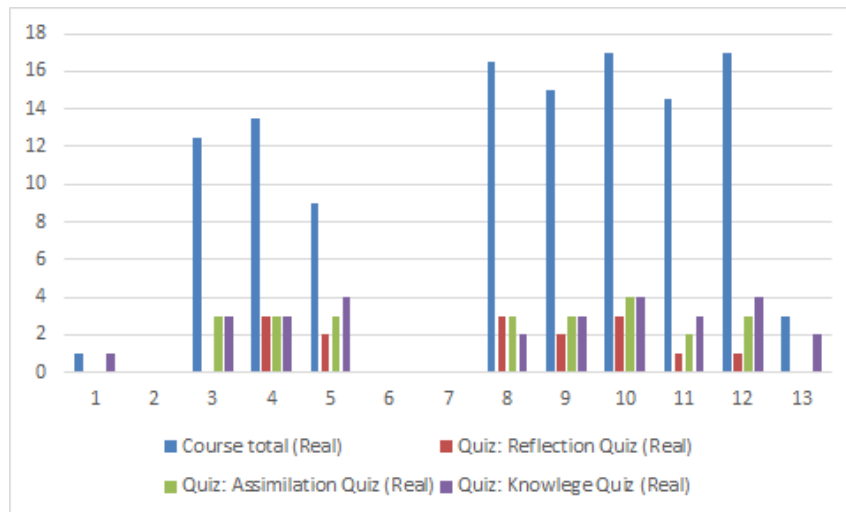


Figure 3.2: Engagement of good number of learners with RQ, AQ and KQ quizzes/activities

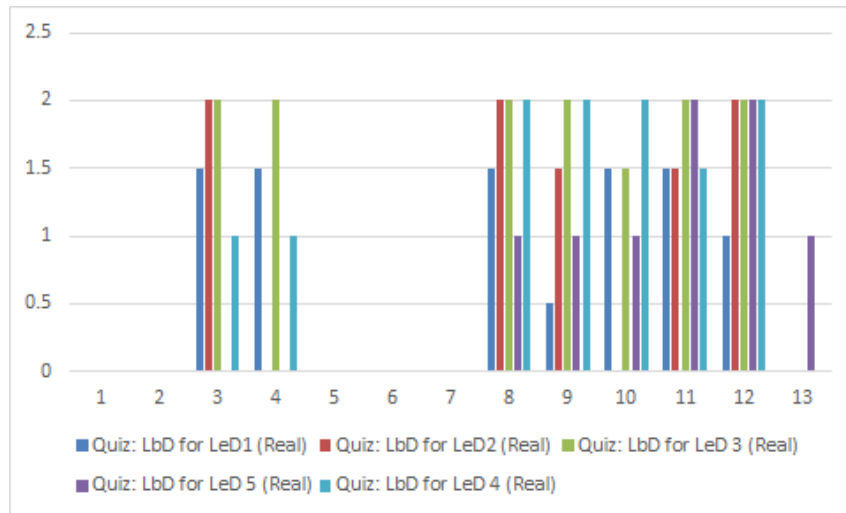


Figure 3.3: Engagement of good number of learners with LbDs for LeDs

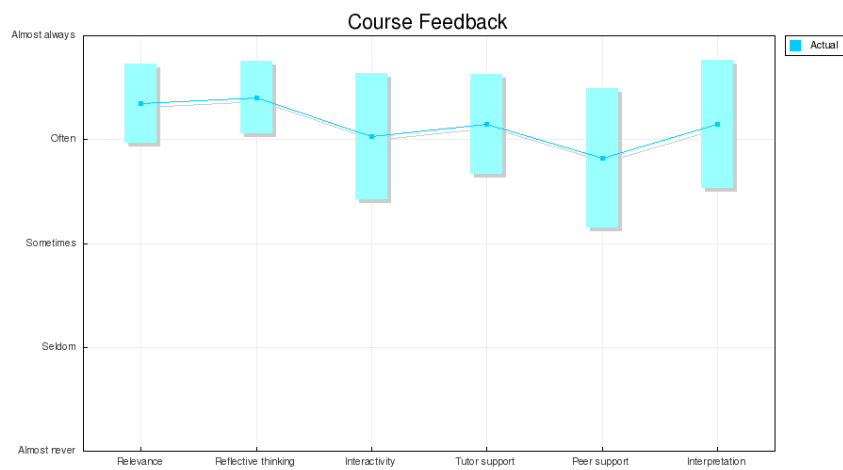


Figure 3.4: A summary of your results compared to the class averages

Section 4

4 REFLECTIONS ON ANALYSIS

The gross data about engagement shows that the number of participants completing the activities/quizzes have decreased to 5 from 8 out of 13 as the course progressed.

4.1 What do gross data about learning, perception and engagement tell about the course?

From the data on scores of participants, it is clear that the scores of the participants are gradually fluctuating, although the number of participants attempting the final Knowledge Quiz (KQ) has drastically fallen (8 on an average of the total participants (13) enrolled). This indicates that the perceived learning value of the course needs improvement.

From the participants' perception of the course, it can be observed that the pace of the course and consistency of course material design needs improvement.

It is clearly evident that the perception of engagement has been low as show in Table 4.1.

In each criteria, the participants are not easily able to get actively involved each time they access the course and don't find the additional resources/reference materials engaging enough.

4.2 What does the analysis tell about the course experience?

The analysis shows that the course wasn't engaging enough and the levels of usability can be improved, although the levels of learning were not that bad. There are very few participants. The analysis is not complete as sample is not enough.

4.3 What needs improvement in the current course offering?

The following sections need considerable improvement: Engagement:

- Engagement in Discussion forums

Table 4.1: Perception of engagement

User	At what moment in class were you most engaged as a learner?	At what moment in class were you most distanced as a learner?	What action from anyone in the forums did you find most affirming or helpful?	What action from anyone in the forums did you find most puzzling or confusing?	What event surprised you most?
1	always	never	discussion	sometimes during discussion	many
2	first 20 minutes	during the last 15 minutes	sharing resources		
3	evening	morning	query	asking for basic queries	casual approach of learners
4	creating videos and forum discussion		creating moodle account	nothing	creating quizzes
5	watching LeDs	watching LeDs	nil	nil	trying to access LbDs
6	When teacher ask question.	Listening	participation	—	—

- Activities and Quizzes Usability
- Consistency in course material design
- Duration of the session Learning
- Reference materials/additional resources

Section 5

WORKLOAD DISTRIBUTION

5.1 Details of Workload Among Team Members

The team consisted of 4 participants. The workload is distributed among them as follows:

1. Satishkumar Varma: (Team leader)
 - (a) Preparing the workload distribution
 - (b) Moodle Gradebook setup and configurations
 - (c) Guest Access
 - (d) Self Enrollment
 - (e) Moodle administrator (setup)
 - (f) Grading Policy
 - (g) Completion Progress Bar and Ticks
 - (h) FDP design report: reviewing and compiling reflections by team members
2. Rajani Sambharam
 - (a) Discussion Forum
 - (b) Course Entry Survey
 - (c) Graded Quizzes RQ, AQ, KQ
 - (d) LxT
 - (e) Feedback Form
 - (f) RCA
 - (g) Rubric for Evaluation of RCA
 - (h) Uploaded all the above in moodle
 - (i) Activation of self enrollment.
 - (j) FDP design analysis report: analysis and reflection of engagement
3. Alka Narula

- (a) LeD 1, LeD 2, LeD 3, LeD 4 and LeD 5
 - (b) LbD 1, LbD 2, LbD 3, LbD 4 and LbD 5
 - (c) Two questions for each LbDs
 - (d) Uploaded all LeDs on Moodle
 - (e) Uploaded all LbDs on Moodle
 - (f) FDP design analysis report: analysis and reflection of learning
4. Saraswathi Srinivasan
- (a) LxT
 - (b) PPT on WordPress
 - (c) PPT on How to Embed Wordpress
 - (d) PPT on Wordpress Plugins
 - (e) WordPress Tutorials
 - (f) Uploaded all PPTs and LxT
 - (g) Discussion Forum
 - (h) FDP design analysis report: analysis and reflection of perception

5.2 Grading Policy Decided by Team Members

There are five graded activities:

1. Knowledge quizzes (KQ): 25% Assessing the knowledge gained by learning content.
2. Assimilation quizzes (AQ): 10% Learning extension resources – 10%
3. Reflection quizzes (RQ): 5% Discussion forum
4. Resource creation assignments (RCA): 25% Ceating resources using the ICT reviewed – 15%
5. LbD and LeD Creation Assignemnts: 10%

Participant should note the following:

1. Minimum score to qualify: 50%
2. One mark per question
3. 50% score is passing
4. No negative marking

5.3 Interaction and Discussion on WhatsApp Group

All team members were actively participated in the FDP Design Activity. Lots of discussion happened over emails and WhatsApp group. The video on WhatsApp group is given [here](#) for your reference. The link for same video is also available [here](#).

References

- [1] Aaron Cocker. (2017, june). an introduction to creating documents in latex. <https://opensource.com/article/17/6/introduction-latex>. [Online; accessed 21-September-2017].
- [2] MOODLE. (2017, may). moodle docs. https://docs.moodle.org/32/en/Using_Lesson. [Online; accessed 5-November-2017].
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- [4] Satishkumar Varma. (2017, july). technical report writing using latex. <https://www.sites.google.com/site/vsat2k/latex>. [Online; accessed 10-September-2017].
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