

IMMEDIATE POST LECTURE FORMATIVE ASSESSMENT BY GOOGLE FORM

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Why this project?

- After 100 minutes of information overloaded Lecture
- Students
 - Face difficulty in digesting the material to get the important points of the lecture
- Instructor
 - Does not know how much the students understand from the lecture

What is that?

- Immediate Post Lecture Formative Assessment by Google Form= IPLFA
- 5 MCQs asked at the end of the lecture
- Questions post by Google Form® online
- Students answer by using their own mobile devices
- Given about 5-10 minutes to submit the answers
- When all students submit the answers, the summary of responses will be shown
- Instructor will go through answers immediately and elaborate on the questions that are poorly answered

Let's experience it

- Take out your phone
- Go to internet
- Type <http://goo.gl/3vbcjf>
- Answer the questions
- Click Submit



Research Questions

Main Questions

1. Does the student find IPLFA beneficial?
2. Will the use of IPLFA have a positive effect in students' test and exam result?

Method

- IPLFA is administered since Week 1
- A 11 questions survey about IPLFA was collected in Week 8
- A test was held in week 10. The same set of question was used for the previous batch (without IPLFA) and the current batch (with IPLFA).
 - This is to ensure a fair comparison between two groups.
- At the end of the Semester (week 16). Students were asked “Do you think IPLFA is useful? Please elaborate”.

Result

- Collected set of 80 students data
 - Year 1 Pharmaceutical Sciences Student taking Basic Pharmaceutics
- Group included 28 male and 52 female
- More than 96 % in both gender agreed that IPFLA reinforced the knowledge learnt in the topic.
- More than 93% male students and 94% female students agreed that IPFLA help them to understand the topic better.

Result

		Gender	Strongly Agree	Agree	Disagree	Strongly Disagree
1	IPFLA is administered efficiently.	M	32%	64%	4%	0%
		F	37%	59%	4%	0%
2	It is engaging to have IPFLA in Lecture.	M	32%	64%	0%	4%
		F	29%	65%	8%	0%
3	It is time consuming to do IPFLA.	M	11%	36%	43%	11%
		F	2%	16%	69%	16%
4	IPFLA helps me to understand the topic better.	M	32%	61%	7%	0%
		F	22%	73%	6%	0%
5	IPFLA reinforces my knowledge about the topic taught.	M	29%	68%	4%	0%
		F	25%	73%	4%	0%
6	IPFLA helps me to do revision on the topic.	M	14%	61%	25%	0%
		F	20%	71%	12%	0%
7	Google Form is an appropriate tool to conduct IPFLA.	M	21%	71%	4%	4%
		F	39%	59%	2%	0%
8	IPFLA should be used in all lectures.	M	14%	54%	25%	7%
		F	24%	51%	25%	2%
9	IPFLA helps me to realise the misconceptions I may have immediately.	M	21%	61%	14%	4%
		F	18%	71%	14%	0%
10	The time given to complete IPFLA is enough.	M	18%	75%	7%	0%
		F	16%	80%	6%	0%
11	The use of IPFLA makes me stay focus during lecture.	M	29%	39%	29%	4%
		F	10%	61%	31%	0%

Result

- Despite the positive response, only 68% of the male students and 75% of the female students would like IPLFA to be in other lectures
- Factors affecting ??
 - Too much effort is required by student
 - Student wants to remain anonymous
 - Student feel bad when negative feedback is received
 - Not enough time to digest lecture content before IPFLA
 - Only apply to content base lecture

Result

- End of the Semester (week 16) qualitative question on “Do you think IPLFA is useful? Please elaborate.”
- Data is based on 80 students
- Total 3 students said “not useful”, 2 out of this 3 preferred to have IPLFA before tutorial.

Useful	75.0%
Not useful	3.8%
Neutral	7.5%
No response	13.8%

Result

- There is significant improvement of 3.53/50 marks in common test result between student with IPLFA and without IPLFA.

Group Statistics

Student	N	Mean	Std. Deviation	Std. Error Mean
With IPLFA	68	34.485	5.7724	.7000
Without IPLFA	86	30.953	6.9577	.7503

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
result	Equal variances assumed	1.843	.177	3.368	152	.001	3.5318	1.0486	1.4600	5.6036
	Equal variances not assumed			3.442	151.628	.001	3.5318	1.0261	1.5045	5.5591

Result

- Students agree that IPLFA
 - Is administered efficiently (Q1)
 - Is engaging (Q2)
 - Reinforces knowledge (Q5)
 - Helps in revision (Q6)
- They are significantly correlated to higher score in IPLFA
- Scores of students who did better in IPLFA also significantly correlates to higher score in Test and Exam.

Result

$r(75) = 0.224, p < 0.05$

Correlations					Correlations				
		IPFLA	CT	Exam			IPFLA	CT	Exam
Q1	Pearson Correlation	.276*	0.042	0.013	Q8	Pearson Correlation	0.204	0.08	-0.037
	Sig. (2-tailed)	0.014	0.71	0.911		Sig. (2-tailed)	0.069	0.481	0.743
	N	79	79	79		N	80	80	80
Q2	Pearson Correlation	.238	0.088	-0.089	Q9	Pearson Correlation	0.074	0.064	0.018
	Sig. (2-tailed)	0.034	0.439	0.431		Sig. (2-tailed)	0.512	0.573	0.871
	N	80	80	80		N	80	80	80
Q3	Pearson Correlation	-0.098	-0.182	-0.026	Q10	Pearson Correlation	0.198	0.085	0.012
	Sig. (2-tailed)	0.387	0.106	0.816		Sig. (2-tailed)	0.079	0.453	0.915
	N	80	80	80		N	80	80	80
Q4	Pearson Correlation	0.145	0.192	0.173	Q11	Pearson Correlation	0.218	0.076	0.01
	Sig. (2-tailed)	0.203	0.09	0.126		Sig. (2-tailed)	0.052	0.501	0.931
	N	79	79	79		N	80	80	80
Q5	Pearson Correlation	.275*	0.171	0.209	IPFLA	Pearson Correlation	1	.293*	.245*
	Sig. (2-tailed)	0.014	0.129	0.063		Sig. (2-tailed)	0.008	0.029	
	N	80	80	80		N	80	80	
Q6	Pearson Correlation	.321**	0.006	-0.035	CT	Pearson Correlation	.293**	1	.701**
	Sig. (2-tailed)	0.004	0.96	0.76		Sig. (2-tailed)	0.008	0	
	N	80	80	80		N	80	80	
Q7	Pearson Correlation	0.175	0.044	0.044	Exam	Pearson Correlation	.245*	.701**	1
	Sig. (2-tailed)	0.12	0.697	0.696		Sig. (2-tailed)	0.029	0	
	N	80	80	80		N	80	80	

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Conclusion

- The result is encouraging and promising
- Students found that IPLFA is engaging and useful in understanding of the topics
- The current batch with IPLFA have better test result than the previous batch without IPLFA
- There is a statistically positive significance correlation between IPLFA and the test and exam result.

Future Direction

- A quasi experiment should be conducted to investigate the effectiveness of IPLFA in improving student result.
- The study of the usefulness and effectiveness of IPLFA can be done in other discipline or years
- Study the effect of IPLFA when conducted before the tutorial
- A qualitative studies can be done on the students who disagree with IPLFA in other modules so as to find out the reasons.

Questions?

