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Abstract

The impact of frequent formative tests on the discipline of Science on academic achievement, achievement motivation and the reflective practices of students in the ninth grade.

The present study aimed at identifying the impact of frequent formative tests in the discipline of general science for ninth basic grade on academic achievement, achievement motivation and reflective practices. To achieve the objective of the study, the researcher employed the experimental approach two samples: the first sample of males which consisted of (56 students) was divided into two groups –experimental group and control group ; the other sample of females which consisted of (89) students was divided into two groups- experimental group and control group. The

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researcher used four formative tests, final achievement test and the. The findings showed that there were statistically significant differences between the means of students' achievement according to the variables- of the group in favor of experimental group and gender in favor of females. Meanwhile, there was no significant impact of the interaction of group and gender. As it turns out there were no statistically significant differences between the levels of achievement motivation according to the study variables but statistically significant difference in the reflective practices according to gender in favor of females was found. Finally, results indicated the presence of statistically significant differences due to the variables of the group and the interaction between group and gender.

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(Carpenter et al., 2009)

(Bangert-Drowns et al., 1991)

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(Roediger & Karpicke, 2006)

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(Hattikudar & postle, 2012)

(Deck, 1998) (Zgraggen, 2009) (Pena & Perez, 2010)

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10.69	30.81	89		
9.24	28.51	72		
11.55	25.60	73		
10.53	27.05	145		

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الدالة الإحصائية	قيمة "ف"	متوسطات المربعات	درجات الحرية	مجموع المربعات		
0.000	40.664	3382.258	1	3382.258	التحصيل	
0.065	3.471	0.816	1	0.816	دافعية الإنجاز	
0.013	6.390	2.349	1	2.349	الممارسات التأملية	
0.049	3.932	327.019	1	327.019	التحصيل	
0.646	0.212	0.050	1	0.050	دافعية الإنجاز	
0.637	0.224	0.082	1	0.082	الممارسات التأملية	
0.978	0.001	0.061	1	0.061	التحصيل	×
0.723	0.127	0.030	1	0.030	دافعية الإنجاز	
0.898	0.016	0.006	1	0.006	الممارسات التأملية	
		83.175	139	11561.354	التحصيل	
		0.235	139	32.699	دافعية الإنجاز	
		0.368	139	51.091	الممارسات التأملية	
			143	120188.000	التحصيل	
			143	2071.948	دافعية الإنجاز	
			143	2152.888	الممارسات التأملية	
			142	15237.818	التحصيل	
			142	33.596	دافعية الإنجاز	
			142	53.527	الممارسات التأملية	

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0.56	3.69	29		
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0.67	3.90	46		
0.58	3.93	89		
0.53	3.85	72		
0.69	3.81	73		
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-2- جامعة القدس المفتوحة، 2000: أساليب تدريس العلوم،

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-4 2004:

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- 1- Bangert-Drowns, R ., Kulik, J .& Kulik, C. 1991: Effects of frequent classroom testing ,**The journal of Educational Research**, **85**,(2) 89-99.
- 2- Bell, B. & Bowie, B. 2000: The characteristics of formative assessment in science education. **Science education**, **85**, 536-553.
- 3-Black, P. & William, D. 1998: Assessment and classroom learning, **Assessment in education**, **5**,(1), 7-69.
- 4- Carpenter, S., Pashler, H. & Cepada, N. 2009: Using tests to enhance 8th grade students retention of us history facts. **Applied Cognitive Psychology**, **23**, 760-771.
- 5- Deck, W. 1998: **The effects of frequent of testing on college students in a principles of marketing course**. Dissertation submitted to the faculty of the Virginia polytechnic Institute and state university in a partial fulfillment of the requirements for the degree of doctor of philosophy.
- 6- Hattikudur, S. & Postle, B. 2011: Effects of test –enhanced learning in a cognitive psychology course, **journal of Behavioral and Neuroscience Research**., **9**(2), 151-157.
- 7- Joshua, M., Joshua, K. & Kritsonis,W. 2006: Use of student achievement scores as basis for assessing teacher instructional effectiveness, National

....

- forum of teacher education journal, 17(3),
<http://www.nationalforum.com>.
- 8- Marshal, j. 2005: **Formative assessment : Mapping the road to success**, white paper prepared for the Princeton review.
<http://trecgoogleforms2010.wikispaces.com>.
- 9- McDaniel, M., Agarwal, P., Huelser, B., McDermott, K. & Roediger, H. 2011: Test- Enhanced learning in a middle school science classroom. The effects of quiz frequency and placement, **Journal of Educational Psychology**, 103(2), 399-414.
- 10- Nelson, L. & Drake, F. 1997: Enhancing reflective practice through alternative assessment. **Journal of research in Rural Education**, 13(1), 47-56.
- 11- Parry, D., Walsh, C., Larsen, C. & Hogan, J. 2012: Reflective practice : A place in enhancing learning in the undergraduate bioscience teaching laboratory, **Bioscience Education**, 19.
<http://journals.heacademy.ac.uk/doi/abs/10.11120/beej.2012.19000004>
- 12- Pena, M. & Perez, J. 2012: Continuous assessment improved academic achievement and satisfaction of psychology, **Teaching Psychology**, 39(1),45-47.
- 13- Philip, 2006: Encouraging reflective practice amongst students. A direct assessmentapproach.Planet,17.
<http://www.gees.ac.uk/planet/p17/1p.pdf>.
- 14- Roediger, H., Agarwal, P., McDaniel, M. & McDermott, K. 2011: Test- Enhanced learning in classroom. Long –term improvement from quizzing.: **Journal of Experimental Psychology: Applied**, 17(4) ,382-395.
- 15- Roediger, H. & Karpicke, J.2006: The power of testing memory: Basic research and implications for educational practice, **Perspectives on Psychological Science**, 1(3),181-210.
- 16- Rohrer, D., Taylor, K. & Sholar ,B. 2010: Test enhance the transfer of learning, **Journal of Experimental Psychology**, 36(1) , 233-239.
- 17- Shirvani, H. 2009: Examining an assessment strategy on high school mathematics achievement. daily quizzes Vs. weekly tests. **American Secondary Education**, 38(1), 34-45.
- 18- Thanh, L. 1998: Frequent classroom assessment and students mathematics learning in a Vietnamese context. Thesis submitted in partial fulfillment of the requirements for the degree of master of science, Kharkov University, Ukraine.
www.bioscience.heacademy.ac.uk/journal/vol19/beej-19-3pdf.
- 19-Zraggen, F. 2009: The effects of frequent testing in mathematics classroom. Unpublished master degree in Education, University of Wisconsin-stout

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