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Identifying evidence based teaching strategies that instructors use and practice in their classroom and their relationship with academic performance

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Abstract

The purpose of this study was to identify evidence based teaching strategies that instructors use and practice in their classroom and their relationship with academic performance. A sample of 390 students was selected from among undergraduate students who were enrolled in an introduction to psychology course offered by the department of humanities and social sciences department at the Hashemite University. A questionnaire was developed to examine instructor's teaching practices in classroom settings, The questionnaire consisted of 10 statements and each statement was categorized into "less practiced", "sometimes practiced", and "most often". The findings of this study showed that most of evidence based teaching practiced in classroom settings at scientific and humanitarian faculties at Hashemite University sometimes. It also revealed that the level of academic achievement among undergraduate students at scientific and humanitarian faculties was moderate.

Keywords: Evidence based teaching strategies; academic achievement, Hashemite University.

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1. Introduction

Learning is a lifelong process and both individuals and organizations are concerned with evidence for what makes "good learning." Evidence-based learning describes a class of approaches, processes, and strategies that have been empirically demonstrated to produce learning outcomes. Educators are increasingly expected to be responsible not only for helping students to achieve the best possible outcomes, but also for using the most scientifically valid methods to achieve them. Many classroom instructors are faced with challenging students behaviors that impact their ability to facilitate learning in a productive way (Sugi & Horner, 2009). Therefore, when a challenging student behaviors encroaches on instructors can minimize inappropriate and disruptive student behaviors and increase academic engagement through the use of evidence-based classroom management practices (Bergeny & Martens, 2006). According to Killian (2006), there are top ten effective based strategies were proved in enhancing academic outcomes:

Strategy No1: Clear Lesson Goals, it is crucial that you are clear about what you want your students to learn during each lesson. Clear lesson goals help you and your students to focus every other aspect of your lesson on what matters most. Hundred of correlational and experimental studies show evidence that setting clear lesson goals, increase success rate in various educational settings (Latham & Locket , 2007).

Strategy No2 : Tell & Show, telling involves sharing information or knowledge with your students while showing involves modeling how to do something. Large number of studies demonstrate that teacher can motivate their students to perform well in the classroom, if they interact, sharing information or the knowledge with their students (Diedrich , 2010).

Strategy No3 : Questioning to Check for Understanding, Research suggest that instructors should spend a large mount of time asking questions and should always check for understanding before moving onto the next part of their lesson. Good & Brophy (2003), classroom questions are best useful diagnosis tool to help indicator student's academic progress. Croom and Staire (2005), note that the appropriate questioning is positively associated with reinforcing their understanding.

Strategy No4 : Summarize New Learning In A Graphical Way, Graphic outlines include things such as mind maps, flow-charts and venn diagrams. you can use them to help students to summarize what they have learned and to understand the interrelationships between the aspects of what you have taught them .Kia ; Alipourt & Ghaderi (2009), indicate that students with visual learning style have the greatest academic achievement.

Strategy No5 : Plenty of Practice, practice helps students to retain knowledge and the skills that they have learned while also allowing you another opportunity to check understanding. Ukpong and George (2012), recommended that students should set a study time table long enough time for effective academic exercises for their private study and stack with it.

Strategy No6 : Provide your Students with Feedback, giving feedback involves letting your students know how they have performed on a particular task along with ways they can improve. Ferris (2006), found that feedback has significantly positive effects on students in terms of academic achievement. Ellis (2008), discovered that giving feedback to students on their class assignment produce significantly high results for students .

Strategy No7 : Be flexible About How Long It Takes to Learn, the idea that given enough time , every student can learn is not revolutionary as it sounds. You keep your learning goals the same, but vary the time you give each child to succeed. Turman and Hartly (1996), find that time management skills and academic performance are positively related .

Strategy No 8 : Get Student Working Together (In Productive Ways), group work is not new, and you can see it in every classroom. However, productive group work is rare. To increase the productivity of your students groups , you need to be selective about the task you assign to them and the individual role that each group member plays and ensure every group member personally responsible for one step. Many studies have been conducted in different settings of education , using different kinds of cooperative learning techniques indicated that appreciate relationship between the higher cognitive and affective outcomes and cooperative learning (Johnson & Johnson, 2005).

Strategy No 9 : Teach Strategies Not Just Content, you can increase how well your students do in any subject by explicitly teaching them how to use relevant strategies. When teaching them mathematics , you need to teach them problem-solving strategies. Marazona, Pickering and Pollodck (2001), focused their attention on successful instructional strategies and found Twenty-one instructional strategies , that can be useful and beneficial in enhancing student achievement

Strategy No 10 : Nurture Metacognition, encouraging students to adopt strategies is important, but is not meta-cognition. Meta-cognition involves thinking about your options, your choices and your results. When using meta-cognition your students may think about what strategies you could use before choosing one, and they may think about how effective their choice on their success . Metacognition is important in learning and is a strong predicator of academic success (Dunning, Johnson, Ehrlinger & Krunger, 2003).

2. Methodology

2.1. Participants

A sample of 390 students was selected from among undergraduate students who were enrolled in an introduction to psychology course offered by the department of humanities and social sciences department at the Hashemite University. Participants represented all faculties at the Hashemite university, with 196 (50%) participants represented all scientific faculties and 194 (49.7%) participants represented all humanities faculties.

2.2. Instrumentation

A questionnaire was developed to examine instructor's teaching practices in classroom settings. Almost all strategies are present in the statements of questionnaire. The questionnaire consisted of 10 statements and each statement was categorized into "less practiced", "sometimes practiced" and "most often".

2.3. Procedure

The questionnaire was distributed to all participants. The participants were instructed to put a tick mark (v) among three that best describes instructor's teaching practices in their classroom against each statement.

3. Results and Discussion

| | Rarely | | Sometime | | Most ofter | า |
|-------------|--------|-------|----------|-------|------------|------|
| Strategy No | Freq | % | Freq | % | Freq | % |
| 1 | 58 | 29.5 | 73 | 37.2 | 65 | 33.1 |
| 2 | 14 | 7.14 | 93 | 47.4 | 89 | 45.4 |
| 3 | 23 | 11.7 | 82 | 41.8 | 91 | 46.4 |
| 4 | 45 | 22.9 | 85 | 43.3 | 66 | 33.6 |
| 5 | 66 | 33.6 | 80 | 40.8 | 50 | 25.5 |
| 6 | 57 | 29.08 | 98 | 50.00 | 41 | 20.9 |
| 7 | 44 | 22.4 | 104 | 53.03 | 48 | 24.4 |
| 8 | 71 | 36.2 | 81 | 41.3 | 44 | 22.4 |
| 9 | 63 | 32.1 | 99 | 50.5 | 34 | 17.3 |
| 10 | 55 | 28.06 | 93 | 47.4 | 48 | 24.4 |

Table 1. Practiced teaching strategies in scientific faculties classroom

Table 1, demonstrate that the following strategies : (strategy 1, strategy 2, strategy 4, strategy 5, strategy 6 strategy 7, strategy 8, strategy 9 and strategy 10) were practiced sometimes in classroom settings in scientific faculties, but the strategy 3 was practiced most often.

| | Rarely | | Sometimes | | | Most often |
|-------------|--------|-------|-----------|-------|------|------------|
| Strategy No | Freq | % | Freq | % | Freq | % |
| 1 | 37 | 19.07 | 71 | 36.5 | 86 | 44.3 |
| 2 | 23 | 11.8 | 87 | 44.8 | 84 | 43.2 |
| 3 | 15 | 7.73 | 91 | 51.03 | 88 | 45.3 |
| 4 | 43 | 22.1 | 100 | 51.5 | 51 | 26.2 |
| 5 | 68 | 35.05 | 93 | 47.9 | 33 | 17.03 |
| 6 | 54 | 27.8 | 93 | 47.9 | 47 | 24.2 |
| 7 | 50 | 25.7 | 94 | 48.4 | 50 | 25.7 |
| 8 | 79 | 40.7 | 69 | 35.5 | 46 | 23.7 |
| 9 | 59 | 30.4 | 87 | 44.8 | 48 | 24.7 |
| 10 | 65 | 33.5 | 89 | 45.8 | 40 | 20.6 |

Table 2. Practiced teaching strategies in humanitarian faculties classroom

Table 2 demonstrate that the following strategies : (strategy 2, strategy 3, strategy 4, strategy 5, strategy 6, strategy 7, strategy 9 and strategy 10) were practiced sometimes in classroom settings in humanitarian faculties, but, the strategy 1 was practiced most often. Finally the strategy 8 was practiced rarely in classroom settings.

Table 3. Descriptive of GPA among Humanitarian and Scientific Faculties

| Faculty | Mean | Ν | Std. Deviation |
|--------------|--------|-----|----------------|
| Scientific | 2.7549 | 196 | .45415 |
| Humanitarian | 2.8618 | 194 | .45815 |
| Total | 2.7899 | 390 | .45741 |

Table 3 demonstrate that the Mean and Standard Deviation of Grade Point Average (GPA) Among Scientific Faculties is 2.75 for the mean and 0.45 for standard deviation but the humanitarian faculties is 2.86 for the mean and 0.45 for the standard deviation.



Figure 1. Strategy 2 and achievement

Figure 1 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 1 sometimes in classroom settings in scientific faculties is (30%), but the students with high academic achievement, show that the percentage of their instructors practicing strategy 1 most often in classroom settings in humanitarian faculties is (28%).



Figure 2. Strategy 1 and achievement

Figure 2 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 2 sometimes in classroom settings in scientific faculties is (35%), but, the students with high academic achievement, show that the percentage of their instructors practicing strategy 2 most often in classroom settings in humanitarian faculties is (28%).



Figure 3. Strategy 3 and achievement

Figure 3 demonstrates that students with high academic achievement, show that the percentage of their instructors practicing strategy 3 sometimes in classroom settings in scientific faculties is (25%),but, the students with high academic achievement, show that the percentage of their instructors practicing strategy 3 sometimes in classroom settings in humanitarian faculties is (31%).



Figure 4. Strategy 4 and achievement

Figure 4 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 4 sometimes in classroom settings in scientific faculties is (28%), but, the students with moderate academic achievement, show that the percentage of their instructors practicing strategy 4 sometimes in classroom settings in humanitarian faculties is (25%).



Figure 5. Strategy 5 and achievement

Figure 5 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 5 sometimes in classroom settings in scientific faculties is (32%), but, the students with high academic achievement, show that the percentage of their instructors practicing strategy 5 sometimes in classroom settings in humanitarian faculties is (28%).



Figure 6. Strategy 6 and achievement

Figure 6 demonstrates that students with moderate academic achievement, show that the percentage of their instructors practicing strategy 6 sometimes in classroom settings in scientific faculties is (30%), but, the students with high academic achievement, show that the percentage of their instructors practicing strategy 6 sometimes in classroom settings in humanitarian faculties is (28%).



Figure 7. Strategy 7 and achievement

Figure 7 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 7 sometimes in classroom settings in scientific faculties is (30%), but, the students with high academic achievement, show that the percentage of their instructors practicing strategy 7 rarely in classroom settings in humanitarian faculties is (25%).





Figure 8 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 8 sometimes in classroom settings in scientific faculties is (27%), but, the students with moderate academic achievement, show that the percentage of their instructors practicing strategy 8 sometimes in classroom settings in humanitarian faculties is (25%).



Figure 9. Strategy 9 and achievement

Figure 9 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 9 sometimes in classroom settings in scientific faculties is (30%), but, the students with high academic achievement, show that the percentage of their instructors practicing strategy 9 sometimes in classroom settings in humanitarian faculties is (30%).



Figure 10. Strategy 10 and achievement

Figure 10 demonstrates that students with low academic achievement, show that the percentage of their instructors practicing strategy 10 most often in classroom settings in scientific faculties is (24%), but, the students with high academic achievement, show that the percentage of their instructors practicing strategy 10 rarely in classroom settings in humanitarian faculties is (24%).

4. Conclusion

The results of this study revealed that a level of academic achievement of Hashemite university students in scientific faculties is below B average because, the degree of using the most of effective evidence based teaching strategies in classroom settings is a moderate .The results also revealed that the most often evidence based teaching strategies using in classroom of scientific faculties is strategy No 3 (Questioning to check for understanding), because, the materials content in scientific faculties are so difficult and interactive. This result is consistent with Good and Brophy (2003), classroom questions are best useful diagnosis tool to help indicator student's academic progress. The results also indicated that the degree of using the most of evidence based teaching strategies in classroom of humanitarian faculties is medium, as result of this, the level of academic achievement of Hashemite university in humanitarian faculties is below B average. The results also revealed that most often evidence based teaching strategies using in classroom of humanitarian faculties is strategy No 1 (clear the lessons goals). Many of correlational and experimental studies show evidence that setting clear lesson goals, increase success rate in various educational settings (Latham & Locket, 2007). Finally the results also revealed that the most often teaching strategies using in the humanitarian is the strategy No 8 (get students working together). This what, many, studies have been conducted in different settings of education, emphasized that using different kinds of cooperative learning techniques indicated that appreciate relationship between the higher cognitive and affective outcomes and cooperative learning (Johnson & Johnson, 2005).

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