Lecture utilized as the primary method of Instruction in the Marine Corps EWS Contemporary Issue Paper Submitted by Captain J. N. Philpot To Major Seay, CG 14 February 20, 2009

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Introduction -

"The one long lecture remains the mainstay of almost every educational institution and conference. This is akin to transport by horse, herbal medicine, or astronomy by binoculars. They all work to a degree, but are hopelessly limited." Isn't it true that the majority of Marines refer to the above stated method of instruction as "death via power point" and dread it's use? Why then does the Marine Corps continue to utilize this method and even abuse it by using it over and over for hours at a time. Simply said, there are more effective proven methods to educate students and the Marine Corps should adapt to and utilize these methods as their primary methods to achieve and maximize the potential for learning.

Lecture via power point as the primary method of instruction decreases the opportunity for learning and does not challenge or motivate seasoned military professionals because it does not allow for participation, experienced based learning, or the application of critical thinking. These points along with others will be addressed in this paper to illustrate that there are more effective ways to achieve the goal of educated Marines who have the ability to apply critical thought to learning.

The lecture method -

When used as the primary method of instruction lecture does not keep a student engaged and hinders the potential for retention and learning. Studies suggest "adult learners attention, after 2-3 minute settling down period at the very start, can be held for about 15-20 minutes." After this period there is a significant drop off in learning if other methods of instruction are not introduced to engage the students and break up the lecture. To illustrate this point a study by J. Hartley and I. K. Davies stated "in a traditional lecture, students could recall approximately 70% of the content from the first 10 minutes of the lecture but only 20% from the last 10 minutes". Despite this the average length of a lecture at one mid-level school is 50 minutes. These studies show why lecture should not be utilized for more than 30 minutes at a time without being combined with interactive methods of instruction.

Power point to supplement lecture-

The use of power point presentation in conjunction with the lecture method is the most preferred educational tool in the Marine Corps. So how does this method affect learning? There is little argument that power point is a beneficial tool and can be utilized to the instructors benefit and achieve improved results when used properly. It can focus students on main points in addition to clarifying information by using media such as short clips, pictures, and graphs. A picture can tell a thousand words.

This being said most Marine educators abuse the use of power point and overwhelm students with too many slides with too much information. Quantity is not quality and it does not help learning the information presented when you are overwhelmed with information. Some power point presentations have over 100 slides of information to be conveyed in a period ranging from 1 hour to $1-\frac{1}{2}$ hours. The majority of these slides have several lines of information to pass, this is not realistic for retention and shows that there needs to be a focus on what we as students are taught: Prioritize, focus, and be brief. A recent study by four retired General officers talked about how certain Marine schools take the "Pecos River Approach" and attempt to teach everything rather than "determine what subjects officers must study and learn, discarding what is superfluous or only nice to know". Simply said most classes are trying to fit 10 lbs of information into a 5 lbs bag.

There is most certainly a time and place where lecture via power point as the primary tool is valid. Most professionals would agree that lecture via power point is very effective in entry-level training when there is very little or no background in a subject or skill being taught. In addition it can be affective when utilized to set a basis of information to expand on in a later discussion that welcomes critical thought and the sharing of ideas and experiences. At the same time it is still necessary to follow the widely accepted view that when utilizing power point and lecture the instructor will lose most of his audience after twenty to thirty minutes if he/she does not vary their delivery method.

Participation -

Lecture via power point as the primary method of instruction does not allow for student participation. Because of this students do not have the opportunity for the sharing and/or debate of ideas and experiences that is shown to maximize potential for learning. The Marine Corps is working toward addressing this issue and has made progress. Yet it still has a long way to go to meet the advice of a 2006 study commissioned by the Marine Corps that recommended that the Marine Corps officer be placed in an "atmosphere that welcomes independent thinking and encourages spirited professional debate." This was not the case at a mid-level school in which the ratio of lecture to discussion in the opening months was 4:1. An expert in the field of education, William Glasser says:

How We Learn

- 10% of what we READ
- 20% of what we **HEAR**
- 30% of what we SEE
- 50% of what we SEE and HEAR
- 70% of what is **DISCUSSED** with **OTHERS**
- 80% of what is **EXPERIENCED PERSONALLY**
- 95% of what we TEACH TO SOMEONE ELSE

Based off the information in this theory, it is imperative that the Marine Corps utilize as many of these methods as possible to obtain the result of educated thinking Marines who can do more than regurgitate information. Rather that they can analyze it, and apply it to critical thought preparing them for real world situations.

The Marine Corps prides itself on allowing our Noncommissioned officers to exercise leadership and decision-making as low as the squad leader level. Why then would we not prepare them, to the best of our ability, based off the most current and available knowledge concerning methods of instruction that work to optimize desired results? Doing this would facilitate a young Marine who would be set up for success when put in a critical decision making moment. It is imperative that the Marine Corps does what it always claims to be great at, adapt and change, to be the best in the business.

Experience based learning and the application of critical thought-

Today's Marines possess an abundance of real life military experiences, to include combat operations, which the Marine Corps needs to improve on tapping into. It is not necessary for a Marine instructor to have every answer or solution because quite a bit of what we do has multiple answers or solutions. An instructor can incorporate experience along with critical thinking if they allow students with real world experience to share their knowledge and alternate solutions that will encourage a debate on what may be best and facilitate critical thought. This would be opposed to being "spoon fed" and believing the instructor's way is always the right way. The study's mentioned earlier in this paper would recommend that the instructor lead a "quided discussion" by allowing his students to do most he talking. This would allow for the sharing of ideas and debate that would encourage critical thought. This is opposed to a discussion in which the instructor talked the majority of the time.

The adverse affects on Marines-

The result of lecture as a primary method of instruction, whether using power point or not, is that it de-motivates students and does not maximize their potential to learn and improve. An informal sample of ten Students at a mid-level career course addressed some basic questions and the following is a summary of the results followed by conclusions.

9 of 10 do not prefer lecture as the primary method of instruction

10 of 10 agree that a guided discussion as a small group is an effective method of instruction

9 of 10 think that their course could improve its methods to achieve better results

9 of 10 think that their level of motivation has decreased since the start of the course

It would be very difficult to argue the results as they clearly support the following conclusions. These students prefer guided discussion opposed to lecture. In addition, they believe that the course could improve its methods to achieve better results. The results of these conclusions have caused 90% of the students' motivation level to decrease. These students have sent a clear message to the Marine Corps and its education system: The Marine Corps should apply varied methods of instruction to improve its results desired by its schools and avoid de-motivating students and their will to learn by not challenging them and demanding critical thinking and debate.

Counter arguments-

Lecture as the primary method of instruction can be effective at times. Examples of when and where this statement would apply as the primary method of instruction would be entry level training and/or when simply establishing a base line for further learning. Another example could be the size of the class needing to be taught compared to the ratio of instructors making it very difficult to incorporate discussion or similar methods of instruction. Lastly, an argument for lecture could be that it has not failed the Marine Corps yet. I would refer you to the opening quote in the paper to address this point. It is important to emphasize that even when utilized as the primary method of instruction at the entry level training or when class size if too large, the instructor should break up the lecture by using alternate methods of instruction or simply a break allowing the student to learn more effectively. Most would agree that using lecture and power point, when combined when other methods of instruction, can be effective.

This paper has addressed the reasons why utilizing lecture via power point as the primary method of instruction will not challenge or motivate a Marine to learn due to the lack of participation. Because of this Marines are seldom afforded opportunities to share ideas, debate and apply critical thinking. In addition several studies have shown that lecture after 20-30 minutes becomes a method of diminishing returns that will not allow for learning nor retention of information. In addition it may de-motivate students making the schools job of educating even more difficult. Bottom, line is that lecture, either used with power point or without, should not be the primary method of instruction. Rather it should set a basis for information and be expanded upon utilizing other methods that will facilitate participation, debate and critical thought.

Outline

- I. Introduction (Set up the paper and its main points)
- II. Background
 - a. Topics for discussion/Main Points
 - b. Current effects
- III. The lecture method
- IV. Power point to supplement lecture
 - a.Value
 - b. Best occasions to utilize
- V. Participation

a. Study results

- VI. Experience based learning and the application of critical thought
 - a. Real world experience
- VII. The adverse affects
 - a. Sample of students
 - i. Motivation
 - ii. Discussion preferred
- VIII. Counter arguments
- IV. Conclusion

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