Attitudes of Teachers toward Teaching Creative Strategies

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Introduction

Given the recent national emphasis on standards and the use of high stakes tests, American teachers may not have positive attitudes toward teaching creative strategies. It is possible for them to conclude that they will be held accountable primarily for how well students perform on summative tests that are based either on state standards or the new national Core Standards being adopted by many states. With so much emphasis on standards, they may not be acquainted with the New Bloom’s Taxonomy that places creating at the top of learning hierarchy, nor are they likely to be aware of why that action was taken.

Another problem they may have is that they don’t really understand how to teach something as nebulous and hard to define as creativity. The teaching of creativity has to be put into a context that is more tangible, so it is important for them to find ways to interpret such an ethereal concept in terms of real world needs. One organization that has given the concept of creativity real world meaning is the William McDonough Architects, a group that produced something called The Bill of Rights for the Planet. Those principles build on previous positions created by the World Congress of the International Union of Architects.

Dr. Joyce VanTassel-Baska (2010), describes the current K-12 landscape as 1) Assessment-driven, 2) Instruction controlled by standards, 3) priorities given to learning in reading and math, and 4) lack of time for creative approaches to teaching and learning. She also feels that instruction is controlled by lower level standards and there is a lack of time for teaching higher levels of thinking and having students create.

As a precursor to the conduct of this research, we provided study subjects information on the New Bloom’s Taxonomy and The Bill of Rights for the Planet. Giving subjects participating in the study baseline information about those two perspectives was critical to later receiving insightful responses to these two essential prompts: (1) To what extent are currently mandated or suggested curriculums allowing the teaching of creativity in their respective grade levels or subjects? and (2) How would they teach if there was not any pressure to meet Annual Yearly Progress (AYP).

Those participating in the study were enrolled in a required graduate course conducted online by Emporia State University, and included 29 teachers currently teaching in Kansas. The study was conducted in September and October, 2010.

Description of the New Bloom’s Taxonomy

Benjamin Bloom’s original Taxonomy of Cognitive Domain was published in 1956. Commonly referred to as “Bloom’s Taxonomy,” it has been translated into 22 languages, and is one of the most widely used references in education. In the 1990’s, one of Bloom’s former students, Lorin Anderson, headed
up a new group of educational theorists and researchers to review and update the original taxonomy. After six years of work, the revision was published in 2001. Since then, many educators have traded in their “old” version of Bloom for the newer rendering. However, they certainly do not represent a majority of the teaching profession. There are still countless educators who are not aware that an update exists, and a like amount who know about the new version, but aren’t sure what to do with it.

First, what exactly has changed? There are three overall differences: terminology, structure, and emphasis. The one gathering attention from most educators is terminology, and that is the one we focus on here. (A web search about the revised taxonomy will provide many sites if you want to know more about the structure and emphasis.) Within the terminology changes are also three differences: (1) some of the categories of the taxonomy were renamed; (2) all of the category names were changed from nouns to verbs; and (3) synthesis and evaluation (now evaluating and creating) changed places on the pyramid. Here is a graphic representing those changes:

Definitions of the new terms are similar to those most widely used with the older version, with a few differences:

**Remembering**: Retrieving, recognizing, and recalling relevant knowledge from long-term memory.

**Understanding**: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.

**Applying**: Carrying out or using a procedure through executing, or implementing.

**Analyzing**: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.

**Evaluating**: Making judgments based on criteria and standards through checking and critiquing.

**Creating**: Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. [2]

As for “what to do with” this new version – it should be used in the same way as the previous taxonomy – to guide the development of curriculum, inform instructional practices, and direct the wording of assessments. These “uses” are what are most important. So… use either or both versions of “Bloom’s Taxonomy” – just assure that teaching and learning go beyond rote memory and the “lower” levels of thinking, to include higher levels as well. Two other things to keep in mind: (1) all ages of student can achieve high levels of thinking; and (2) a single activity or assignment can include multiple kinds of thinking skills. Here is a simple example that covers all six of Bloom’s categories:

**Jack and the Beanstalk** [3]
<table>
<thead>
<tr>
<th>OLD TERM</th>
<th>NEW TERM</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Remembering</td>
<td>Where did Jack get the beans?</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Understanding</td>
<td>Illustrate the story.</td>
</tr>
<tr>
<td>Application</td>
<td>Applying</td>
<td>List at least two crimes Jack may have committed.</td>
</tr>
<tr>
<td>Analysis</td>
<td>Analyzing</td>
<td>Find one or more differences between Jack’s earlier and later behavior.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Evaluating</td>
<td>Do you think Jack’s actions were justified? Why or why not?</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Creating</td>
<td>Create a mock trial in which Jack is accused of criminal actions.</td>
</tr>
</tbody>
</table>

Rationale for Using The Bill of Rights for the Planet as the Medium for Stimulating the Teaching of Creativity

The Bill of Rights for the Planet was created by architects [4] who are obviously interested in the whole field of design, which marries the practical aspects of life to artistic interpretations. What makes the list so interesting in the realm of teaching and learning is that it calls for an improved kind of human interaction with the environment, making it an inherent part of every subject in school. It doesn’t take much imagination to see how science, mathematics, language arts and social studies are represented. The same is true of all fine and practical arts subjects, as well as physical education and wellness. A review of the nine principles can cause one to see the relationship quickly:

1. Insist on the right of humanity and nature to co-exist in a healthy, supportive, diverse, and sustainable condition.

2. Recognize Interdependence. The elements of human design interact with and depend on the natural world, with broad and diverse implications at every scale. Expand design considerations to recognizing even distant effects.

3. Respect relationships between spirit and matter. Consider all aspects of human settlement including community, dwelling, industry, and trade in terms of existing and evolving connections between spiritual and material consciousness.

4. Accept responsibility for the consequences of design decisions upon human well-being, the viability of natural systems, and their right to co-exist.

5. Create safe objects of long-term value. Do not burden future generations with requirements for maintenance or vigilant administration of potential danger due to the careless creations of
6. Eliminate the concept of waste. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems in which there is no waste.

7. Rely on natural energy flows. Human designs should, like the living world, derive their creative forces from perpetual solar income. Incorporate this energy efficiently and safely for responsible use.

8. Understand the limitations of design. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and mentor, not an inconvenience to be evaded or controlled.

9. Seek constant improvement by the sharing of knowledge. Encourage direct and open communication between colleagues, patrons, manufacturers and users to link long term sustainable considerations with ethical responsibility, and re-establish the integral relationship between natural processes and human activity.

The rationale for using the *Bill of Rights for the Planet* in the study was to provide subjects with specific cognitive sets [4] out of which they could imagine student learning outcomes, lessons and classroom activities. For example, the second point in the *Bill of Rights* mentions broad and diverse implications with regard to human interactions with the natural world. Clearly, a statement like that rejects the notion that there is only one way for human beings to structure cities or neighborhoods, so an interesting scenario can be established that—given the needs of particular human communities—cities might be organized differently to meet those needs. Curricular scenarios like that call for interdisciplinary (integrated) programs of study in which statistics, pollution control systems, media organizations, and anthropological perspectives are mixed with human wellness considerations and aesthetics.

**Strategy for Eliciting Responses from Teachers**

Subjects in the study, after receiving an opportunity to consider and study the ramifications of the *New Bloom’s Taxonomy* and the *Bill of Rights for the Planet*, were asked to extrapolate ideas found in those processes and generate viewpoints through responses to the following questions:

(1) To what extent are currently mandated or suggested curriculums allowing the teaching of creativity in their respective grade levels or subjects?

(2) How would they teach if there was not any pressure to meet Annual Yearly Progress (AYP)?

**Results from the Survey of Teachers (n=29)**

The following is the average frequency that teachers said they taught each level of Bloom’s Taxonomy. The scale they were asked to use was 1 = some; 2 = often; and 3 = very frequently.

<table>
<thead>
<tr>
<th>New Bloom’s Category</th>
<th>Average frequency presently taught to help meet Annual Yearly Progress (AYP)</th>
<th>New Bloom’s Category</th>
<th>Average frequency they would teach if there was not pressure to meet AYP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Frequency</td>
<td>Category</td>
<td>Frequency</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Remembering</td>
<td>2.6</td>
<td>Remembering</td>
<td>1.8</td>
</tr>
<tr>
<td>Understanding</td>
<td>2.6</td>
<td>Understanding</td>
<td>2.5</td>
</tr>
<tr>
<td>Applying</td>
<td>2.5</td>
<td>Applying</td>
<td>2.2</td>
</tr>
<tr>
<td>Analyzing</td>
<td>2.1</td>
<td>Analyzing</td>
<td>2.2</td>
</tr>
<tr>
<td>Evaluating</td>
<td>1.7</td>
<td>Evaluating</td>
<td>2.4</td>
</tr>
<tr>
<td>Creating</td>
<td>1.1</td>
<td>Creating</td>
<td>2.3</td>
</tr>
</tbody>
</table>

The above responses indicate some interesting observations. The bottom and top categories, remembering and creating, showed the most differences if there was not the pressure of state tests and meeting annual yearly progress (AYP). Presently these teachers teach remembering between often and very frequently on the scale, but without the pressure to meet AYP, they would teach it (1.8) but not nearly at the frequency they are emphasizing it now (2.6). Comments for the frequent teaching of remembering include, “Crucial for recall on assessments” and that terminology was essential to other learning. Some teachers felt it was not necessary to memorize facts that should be referenced or formulas that are usually given. Equally as interesting is the creating category which scored lowest (1.1) for how these teachers teach now but that would rise to 2.3 if there was not the pressure to meet AYP. One teacher replied if there was not the pressure for AYP, “Creating and creativity would get more attention because we would be free to explore.” Another wrote, “I believe that if we had the time to spend creating, the rest would fall into place. They cannot create what they don’t remember or understand. I like to watch them learn through creating, but it takes time, time that I just don’t have with the ridiculous state test.” One teacher who indicated a frequency of 1 for how they teach now said that creating was “too time consuming, lower level students did not properly participate,” however that same teacher marked 3 for the frequency if there was not pressure to make AYP. The sentiment from all the respondents was that creating was the best way for students to retain and show they understand the material but time was the factor that did not allow them to have students create as much as they would like to. Only one teacher responded with a 3 for the frequency of how she teaches creating now, “I find this step is natural and almost creates itself as an assignment, especially in the writing process.” Evaluating also showed an increase (.7) but not as much as creating that jumped quite dramatically (1.2). The other categories stayed the same or had a slight change.

**Other Responses from the Survey:**

| Creating deserves to be at the top of Bloom’s Taxonomy | The category of “creating” actually includes all other categories in Bloom’s Taxonomy | Have you had problems with teaching in the category of “creativity”? |
Sixty seven percent of the teachers felt “creating” deserves to be at the top of Bloom’s Taxonomy in the context of student learning. Comments that represent this group of teachers are, “This allows for educators to truly evaluate whether a student actually learned the information and can apply it correctly in order to be successful.” and “The other levels of Bloom’s Taxonomy must be fully mastered to be an architect of a new creation.” Eighty three percent believed that the “creating” category actually included all the other categories of Bloom’s Taxonomy. One comment sums this up, “Absolutely. We cannot create what we don’t understand.”

Forty three percent said they had problems teaching in the category of creativity. The problems centered on time as the major factor. Most respondents felt that having students create took more time and the comments following represent the majority of respondents: “Time constraints unfortunately squash creativity sometimes. Without the pressures of state testing and standards, we could individualize a lot more efficiently and allow our kids to truly be creative outside the art classroom.”; “Allowing students time to be creative as well as time to complete the national standards (which do not contain time for much creativity!) is a struggle.” A comment that fits the sentiment of this teacher group is, “Creativity is at the top, but when do we have time to get there? Lesson plans, test preparation, dealing with parents, state requirements, and bureaucracy takes so much of our (teachers) time. . .we are lucky to get halfway up the hill (pyramid).”

From the questionnaire on the application of “The Bill of Rights for the Planet”, 80% felt it suggested something they could do in their classes pertaining to the teaching and learning of creativity. The teachers responding to this survey found a variety of ways this could be used for students to communicate and collaborate on creating products in technology, ways to eliminate waste within their school, improving relations between each other, and a focus for teachers to create assignments that hold long term value instead of busy work. Fifty percent felt it could be used in any content area while 33% felt it was more applicable to vocational courses and the other 17% selected music and art classes. The consensus felt the Bill of Rights could serve to make students well rounded because they take into account the fact that their actions have an effect on things greater than themselves.

Eighty percent felt that a curriculum that emphasizes creative teaching and learning must incorporate interdisciplinary configurations to connect currently separate subjects. Twenty percent said they did not believe creativity must be integrated among subject areas. The majority felt that cross-curricular strategies are much more effective than separate subjects and feel that students currently do not make connections of things they are learning in different classrooms. Typical comments are, “It increases learning and allows the person to connect the subject material.” and “Showing a relationship between subjects allows students to see a correlation. It allows them to connect a subject that they may not understand with a concept that they have a firm grasp.”

The majority of the respondents (80%) believe that the American system for holding schools accountable would need to change if the focus of instruction employed more than a moderate degree
of teaching and learning for creativity. Some of the changes needed or concerns expressed by these teachers are:

- More learning around creativity and less remembering-more time to reach goals
- We might move backwards in our students’ ability to understand the facts, reasons, and logic involved in the core academic curriculum. Students might be more creative in their studies, but would fail to understand core principles of individual disciplines.
- State assessments have changed the way people teach...focusing on “teaching to the test” because their job depends on it rather than teaching to be creative. I believe state assessments are a good thing for those schools that weren’t doing anything…and we do need a system to hold schools accountable; however, there has to be a better way! Test scores shouldn’t be the only factor when it comes to a student’s success. I was a terrible test taker!
- Current system is absurd . . . I am forced to sacrifice truly relevant skills because they aren’t on the test. I am forced to rush through stuff to make sure I reach all the standards. A better way to hold us accountable is to allow educators and administrators to help set the standards or create the evaluation tools.
- The current system does not properly identify accountability. A new system, which could take into account creativity (over standardized testing), would be beneficial to many.

Even though 80% felt the assessment system needed to change, only 40% believed that the kind of change with an emphasis on having students create would be a good direction for the nation to take, while 40% were not sure and only 20% responded with “no” it would not be a good direction to take. Those responding that it wouldn’t be a good direction to take, had various responses including that we cannot force creativity, and students would have to desire it otherwise they would just be going through the motions; students are very clever and creative as it is and “Poor academic performance and the disconnect of student creativity/ingenuity with academics is not a function of lack of creativity or creativity education.” Another teacher commented, “The current system for holding schools accountable is definitely broken and should be changed. However, I do not believe it is directly related to creative style of teaching.” Those believing it would be a good change said schools need to be held more accountable than they have in the past; however it is important to engulf all aspects of Bloom’s Taxonomy, rather than just remembering. Another felt strongly that things had to change as “the world of education is crumbling.” This teacher went on to say, “I hope that this is as far as the pendulum can swing this way-I am not sure how much more we can take. There is no motivation for new teachers to stay in the field—we are expected to teach standards that have little real-life value; we are held accountable for getting all of our students to proficient, while being told to individualize to meet our students varied needs, while budgets are being cut and we are being spread thinner and thinner. Our kids are not as prepared for college and careers as they could be. If things don’t change soon, some excellent teachers are going to find a less stressful, more productive, positive environment to work in. While I think it is imperative that teachers are held accountable and evaluated on a regular basis, the current system (is grossly lacking)."

Conclusions

Teachers in this survey do seem to focus on lower levels of Bloom’s Taxonomy in an effort to prepare
students for standardized tests. Given the option, they would prefer to have students evaluate and create. Evaluating as one teacher described, “allows kids to express opinions and openly discuss different points of view” and creating is “a hands on interaction that leads to better learning as well as interaction with others.” These teachers recognize the value of critical thinking skills at the top of Bloom’s Taxonomy but do not feel there is enough classroom time to spend because of the pressure to prepare students for standardized tests. Despite their beliefs that having students create is very important, 20% did not think this kind of change was a good direction for the nation to take and 40% were unsure. Teachers felt the assessment system needs to incorporate more than standardized tests and should include other types of performance assessments that school districts are accountable for measuring. Some did not know how creating fit into the picture while others saw it as a natural progression of learning. It appears teachers approached the idea of change with caution as they do not want the pendulum to swing too far and students are not getting basic knowledge.

Summary

Is creating important in the learning process? According to this sample of Kansas teachers the answer is “Yes” but it is not easy to implement with the pressure to meet Annual Yearly Progress (AYP).

Acknowledgements

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References


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