Gap Analysis and Improvement Plan

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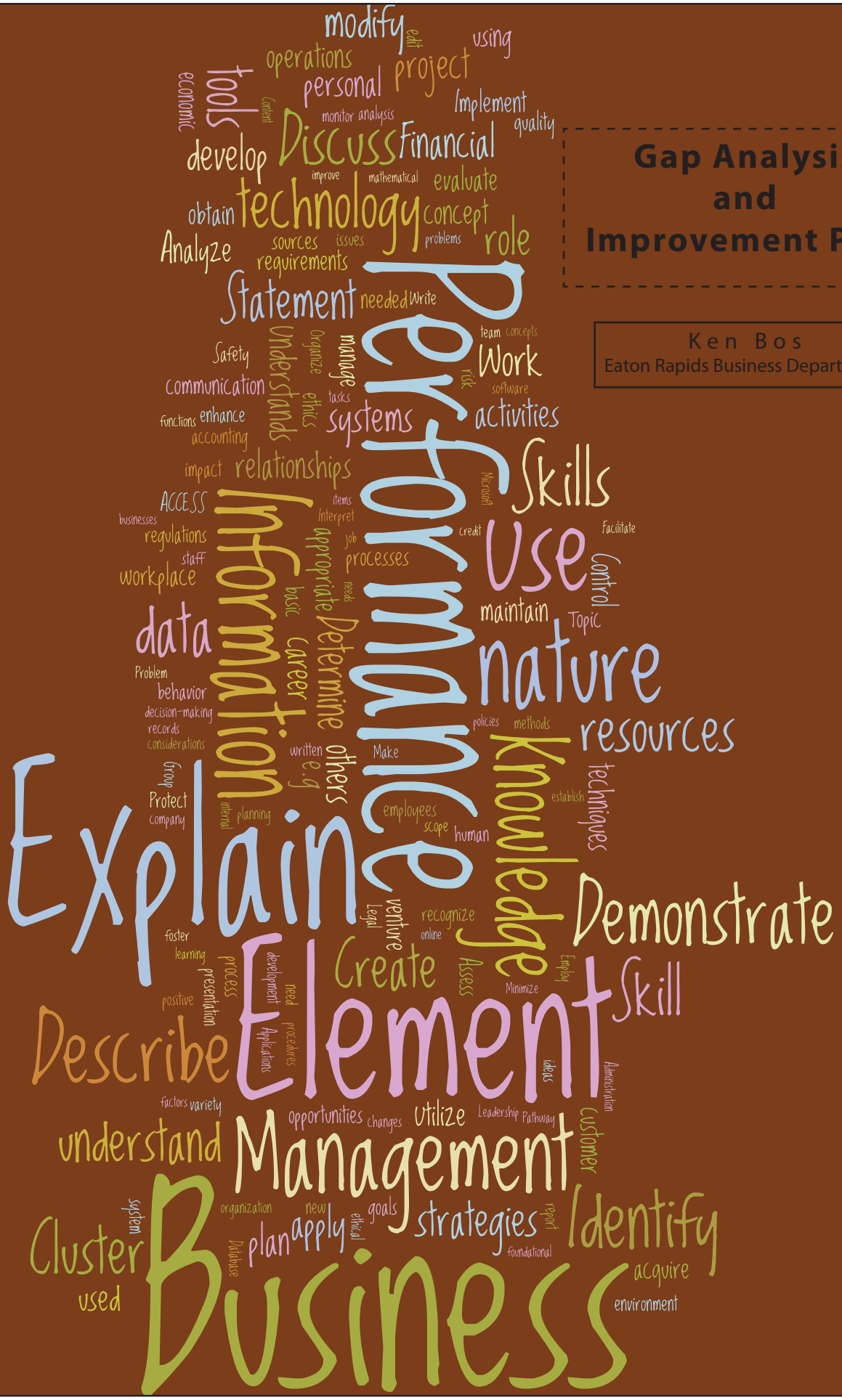


52.0299 BUSINESS ADMINISTRATION MANAGEMENT & OPERATIONS

Michigan Technical Standards
National Career Pathway Clusters
National Cluster Foundation Skills
Michigan Career and Employability Skills and Michigan Technology Skills

BMA Gap Analysis, Segmenting Improvement Plan

There are some areas that I am not in total compliance with the 52.0299 Business Administration, Management & Operations TRAC document. The courses that I teach change from year to year. My teaching assignment for this year included the following classes:

Digital Imaging for Web Design
Desktop Publishing/ Web Publishing
Business Administration

The things we taught 10 years ago are almost ancient history. My efforts in the classroom have been to adapt to current technology and teach content that will have more current relavency and also long term future usage. I think I may still have bell bottom jeans somewhere even though they went out of style about 1975. People still wear jeans, just not bell bottoms. Many of the goals in our TRAC book are based on Office 2003. The Although Office 2003 is still applicable for students to become familiar with, it is not necessarily going to lead them to a high paying job. We are in a rapidly changing technologically oriented society . MySpace gave way to Facebook which is being challenged by Twitter. Things change faster than many of us can keep up with. It is easy to be out of style. Even if Word 2003 is eclipsed by Word 2007 it is still a temporary level to stand on. WordPerfect, Word 2003, Word 2007, Open Office Writer, are all based on the Typewriter model invented over a century ago. Excel and other spreadsheets are all based on the original Visicalc from the Apple II from the 70's. Our teaching needs to be based on the skills that are common to all of these earlier versions of software and hardware and yet give the skills necessary adapt to new technology. There are several skills that are "old school" but still valid. Other skills are available to learn but are very limited in use. I know a lot of nerds, and I have yet to find anyone who has actually found a use for a Pivot Table in Excel. Perhaps there is a better use of students short time in school. Since I disagree that some of the content is not relavent I have set out to analyze our current curriculum against ***Blooms Taxonomy***.

Things change faster than many of us can keep up with.

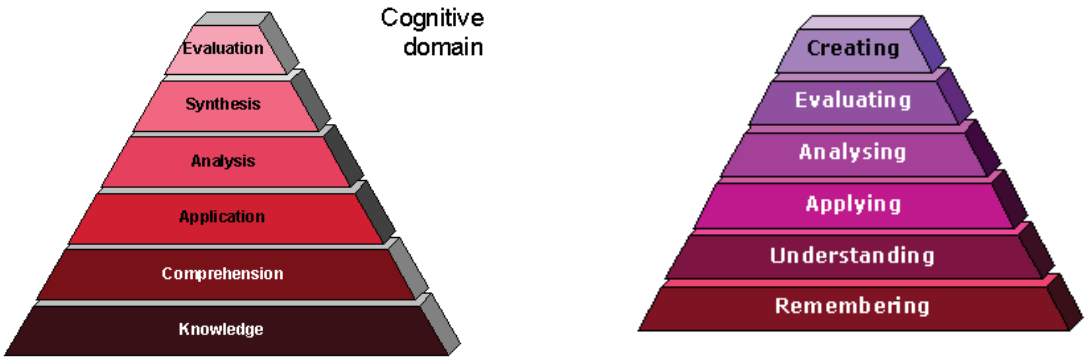
Bloom's Taxonomy(1956) is a model developed by Dr Benjamin S. Bloom that focuses on the "mastery" of subjects and the promotion of higher forms of thinking, rather than just the simple transferring of facts. Bloom demonstrated that most teaching focuses on fact-transfer and information recall, which is the lowest level of training, rather than true meaningful personal development. It is a clear and effective model, for the explanation and application of learning objectives, teaching and training methods, and measurement of learning outcomes.

Bloom's Taxonomy provides a structure for planning, designing, assessing and evaluating training and learning effectiveness. His original 6 six question categories for the cognitive domain are as follows:

1. **Knowledge**
2. **Comprehension**
3. **Application**
4. **Analysis**
5. **Synthesis**
6. **Evaluation**

Bloom's students Anderson and Krathwohl carried the theory out a bit farther (1995-2001). They came up with a slightly different classification of categories in the cognitive domain. They changed the name of Synthesis to Creating and moved it to the top level. They also converted noun nomenclature to verbs.

Blooms domain on the left and Krathwohl on the right.



I have limited my current research to our curriculum under the original cognitive domain of Bloom. I have evaluated the BMA Skills, Clusters and and Standards as they are listed by use of the verbs that denote the type of learning as classified by Bloom. There are several sources listing these verbs on the world wide web. See the bibliography for one such website.

VERBS THAT MAY BE USED IN STATING COGNITIVE OUTCOMES FOR DIFFERENT LEVELS OF REASONING

1.Knowledge: arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce state, record, identifies, matches, names, outlines

2.Comprehension: classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate.

3.Application: apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.

4.Analysis: analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test.

5.Synthesis: arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write.

6.Evaluation: appraise, argue, assess, attach, choose compare, defend estimate, judge, predict, rate, core, select, support, value, evaluate.

Data and Charts

The data for each of Blooms original domains appears on this page. The use of each given verb was tallied as to how often it was used in the TRAC document for Business Administration Management and Operations.

Knowledge	**61**
arrange	0
define	8
duplicate	0
label	1
list	19
memorize	0
name	1
order	3
recognize	15
relate	13
recall	0
repeat	2
reproduce	0
state	42
record	15
identifies	0
matches	0
names	2
outlines	2
Total	**184**

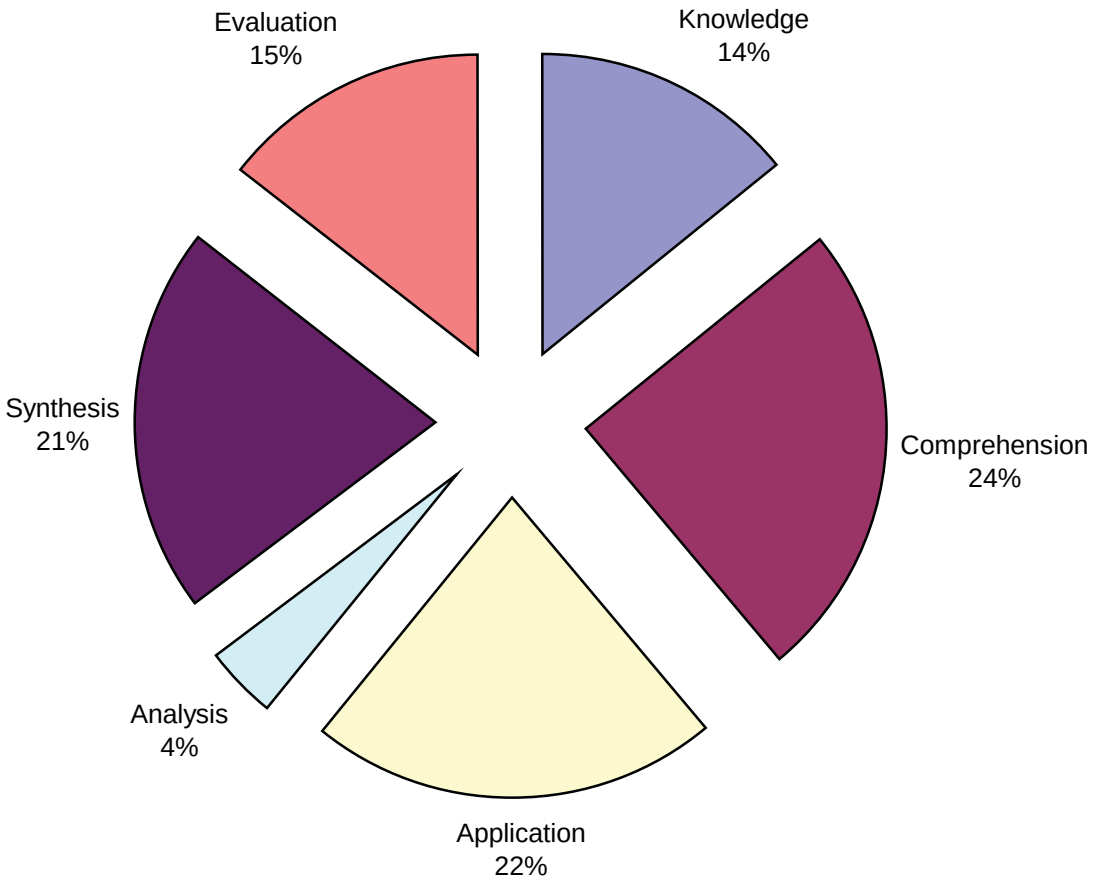
Comprehension	**0**
classify	0
describe	56
discuss	43
explain	123
express	1
identify	52
indicate	0
locate	3
recognize	15
report	16
restate	0
review	3
select	11
translate	0
Total	**323**

Application	**19**
apply	27
choose	2
demonstrate	52
dramatize	0
employ	48
illustrate	0
interpret	0
operate	2
practice	4
schedule	4
sketch	0
solve	13
use	105
write	12
Total	**288**

Analysis	**11**
analyze	22
appraise	0
calculate	3
categorize	0
compare	4
contrast	1
criticize	0
differentiate	0
discriminate	0
distinguish	0
examine	2
experiment	1
question	6
test	1
Total	**51**

Synthesis	**0**
arrange	0
assemble	0
collect	3
compose	0
construct	1
create	38
design	9
develop	43
formulate	3
manage	96
organize	13
plan	41
prepare	8
propose	1
set up	1
write	12
Total	**269**

Evaluation	**3**
appraise	0
argue	0
assess	18
attach	2
choose	2
compare	4
defend	2
estimate	1
judge	0
predict	6
rate	107
core	1
select	11
support	9
value	5
evaluate	19
Total	**190**

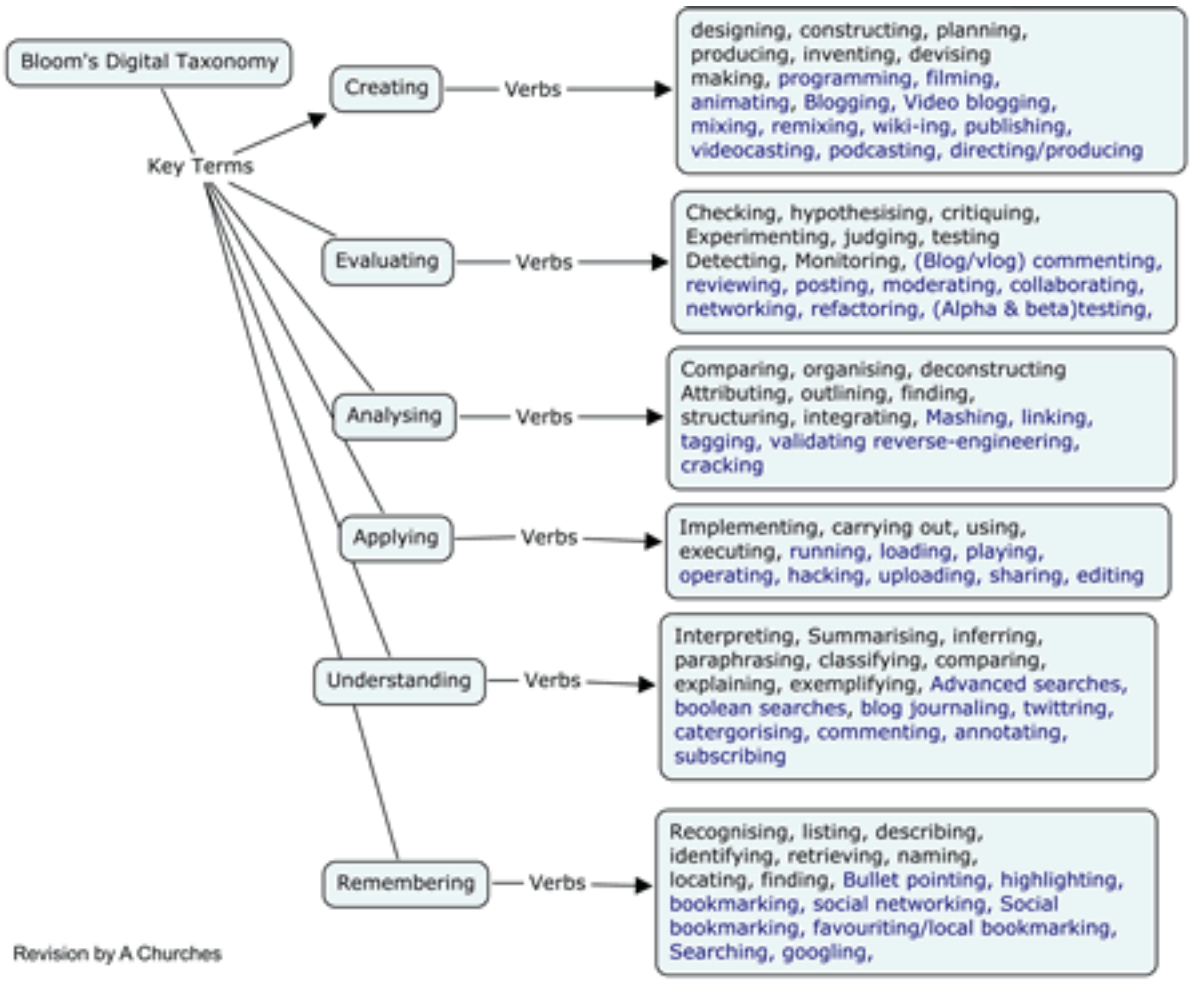


Analysis

The data on the previous page gave rise to the pie chart shown. It appears that Bloom was correct in his analysis that most learning in schools occurs in the lower levels. Knowledge, Comprehension and Application take up nearly 60% of the course content by this alalysis method. The good news is that Synthesis, which Anderson and Krathwohl renamed Creating, is considered the highest level and verbs describing it appeared 21% of the time in the TRAC document. An alternate version of the data is shown in the word cloud given on the next page and also on the cover. It is less mathematical but shows which words were used the most in the document. See the bibliography for a link to **Wordle**

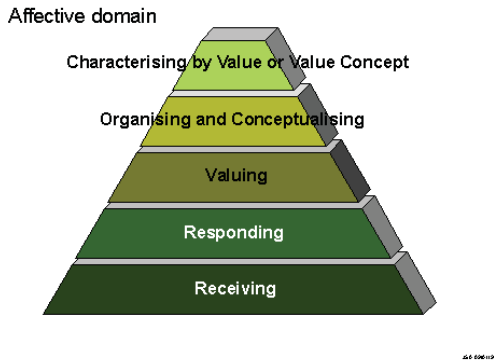
Observations

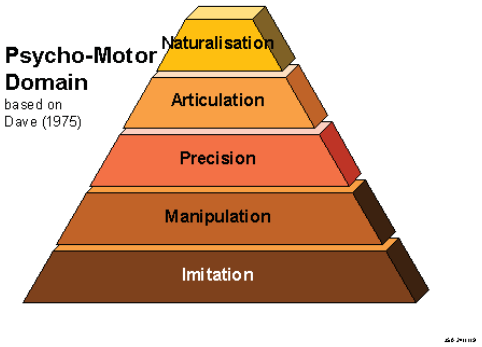
What can we do to prepare our students for the next half century? Can we rely on the curriculum of the past? The technological adaptations and information overload we are now creating will require a very different type of worker and learner. Andrew Churches(2007) suggests the following Digital Taxonomy. Not only are kids of today learning in a different manner. They are preparing for a different world. We need to find different ways to teach them. Visual learning and graphics are used in their daily lives. Finding ways to allow students to adapt to a visual and graphic world is partly my goal and part of my job. The digital extensions proposed are listed .



Limitations:

I have not yet collected any data nor done any research into the affective domain (Kratwohl, Bloom and Masia (1964) and the Psycho-motor domain Dave (1975)





Extensions :

The digital additions as proposed by Churches (2007) and their justifications are as follows:

Remembering

- **Bullet pointing** - This is analogous with listing but in a digital format.
- **Highlighting** – This is a key element of most productivity suites, encouraging students to pick out and highlight key words and phrases is a techniques for recall.
- **Bookmarking or favouriting** – this is where the students mark for later use web sites, resources and files. Students can then organise these.
- **Social networking** – this is where people develop networks of friends and associates. It forges and creates links between different people. Like social bookmarks (see below) a social network can form a key element of collaborating and networking
- **Social bookmarking** – this is an online version of local bookmarking or favourites, it is more advanced because you can draw on others bookmarks and tags. While higher order thinking skills like, collaborating and sharing, can and do make use of these skills, this is its simplest form - a simple list of sites saved to an online format rather than locally to the machine.
- **Searching or "googling"** - Search engines are now key elements of students research. At its simplest for (here) student are just entering a key word or phrase into the basic entry pane of the search engine. This skill does not refine the search beyond the key work or term.

Understanding

- **Advanced and Boolean Searching** - This is a progression from the previous category. Students require a greater depth of understanding to be able to create, modify and refine searches to suit their search needs.
- **Blog Journalling** – This is the simplest of the uses for a blog, simply a student "talks" "writes" or "type" a daily or task specific journal. This show a basic understanding of the activity report upon. The blog can be used to develop higher level thinking when used for discussion and collaboration.
- **Categorising & Tagging** – digital classification - organising and classify files, web sites and materials using folders, using Del.ico,us and other similar tools beyond simple bookmarking. This can be organising, structuring and attributing online data, meta-tagging web pages etc. Students need to be able understand the content of the pages to be able to tag it

- **Commenting and annotating** – a variety of tools exist that allow the user to comment and annotate on web pages, pdf files and other documents. The user is developing understanding by simply commenting on the pages. This is analogous with writing notes on hand outs, but is potentially more powerful as you can link and index these.
- **Subscribing** – Subscription takes bookmarking in its various forms and simple reading one level further. The act of subscription by itself does not show or develop understanding but often the process of reading and revisiting the subscribe feeds leads to greater understanding.

Applying

- **Running and operating** - This the action of initiating a program. This is operating and manipulating hardware and applications to obtain a basic goal or objective.
- **Playing** – The increasing emergence of games as a mode of education leads to the inclusion of this term in the list. Students who successfully play or operate a game/s are showing understanding of process and task and application of skills.
- **Uploading and Sharing** - uploading materials to websites and the sharing of materials via sites like flickr etc. This is a simple form of collaboration, a higher order skill.
- **Hacking** – hacking in its simpler forms is applying a simple set of rules to achieve a goal or objective.
- **Editing** – With most media's, editing is a process or a procedure that the editor employs.

Analysing

- **Mashing** - mash ups are the integration of several data sources into a single resource. Mashing data currently is a complex process but as more options and sites evolve this will become an increasingly easy and accessible means of analysis.
- **Linking** – this is establishing and building links within and outside of documents and web pages.
- **Reverse-engineering** - this is analogous with deconstruction. It is also related to cracking often with out the negative implications associated with this.
- **Cracking** – cracking requires the cracker to understand and operate the application or system being cracked, analyse its strengths and weaknesses and then exploit these.

Evaluating

- **Blog/vlog commenting and reflecting** - Constructive criticism and reflective practice are often facilitated by the use of blogs and video blogs. Student commenting and replying to postings have to evaluate the material in context and reply to this.
- **Posting** – posting comments to blogs, discussion boards, threaded discussions are increasingly comment elements of students daily practice. Good postings like good comments are not simple one line answers rather they structured and constructed to evaluate the topic or concept.
- **Moderating** – This is high level evaluation, the moderator must be able to evaluate a posting or comment from a variety of perspectives, assessing its worth, value and appropriateness.
- **Collaborating and networking** – Collaboration is an increasing feature of education. In a world increasingly focused on communication, collaboration, leading to collective intelligence is a key aspect. Effective collaboration involves evaluating the strengths and abilities of the the participants and evaluating the contribution they make. Networking is a feature of collaboration, contacting and communicating with relevant person via a network of associates.
- **Testing (Alpha and Beta)** – Testing of applications, processes and procedures is a key element in the development of any tool. To be an effective tester you must have the ability of analyse the purpose of the tool or process, what its correct function should be and what its current function is.
- **Validating** – With the wealth of information available to students combined with the lack of authentication of data, students of today and tomorrow must be able to validate the veracity of their information sources. To do this they must be able to analyse the data sources and make judgements based on these.

Creating

- **Programming** - Whether it is creating their own applications, programming macros or developing games or multimedia applications within structured environments, students are routinely creating their own programs to suit their needs and goals.
- **Filming, animating, videocasting, podcasting, mixing and remixing** – these relate to the increasing trend and availability of multimedia and multimedia editing tools. Students frequently capture, create, mix and remix content to produce unique products.
- **Directing and producing** – to directing or producing a product, performance or production is a highly creative product. It requires the student to have vision, understand the components and meld these into a coherent product.
- **Publishing** – whether via the web or from home computers, publishing in text, media or digital formats is increasing. Again this requires a huge overview of not only the content being published, but the process and product. Related to this concept are also Video blogging – the production of video blogs, blogging and also wiki-ing - creating, adding to and modify content in wikis. Creating or building Mash ups would also fit here.

Conclusion:

Although I have not eliminated the gap between what I am teaching and the curriculum as outlined in the TRAC book, I am working on delivering a curriculum much more robust than what is given. In fact, I propose that the curriculum be updated to reflect what is needed by our students to be able to use more modern technology and create their own future that is not based so much on what worked in the past, but what skills they need in the future. The classifications proposed by Bloom(1956), furthered by Anderson and Krathwohl(2000) and applied to digital media by Churches(2007) are a start in the right direction.

Link Bibliography:

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