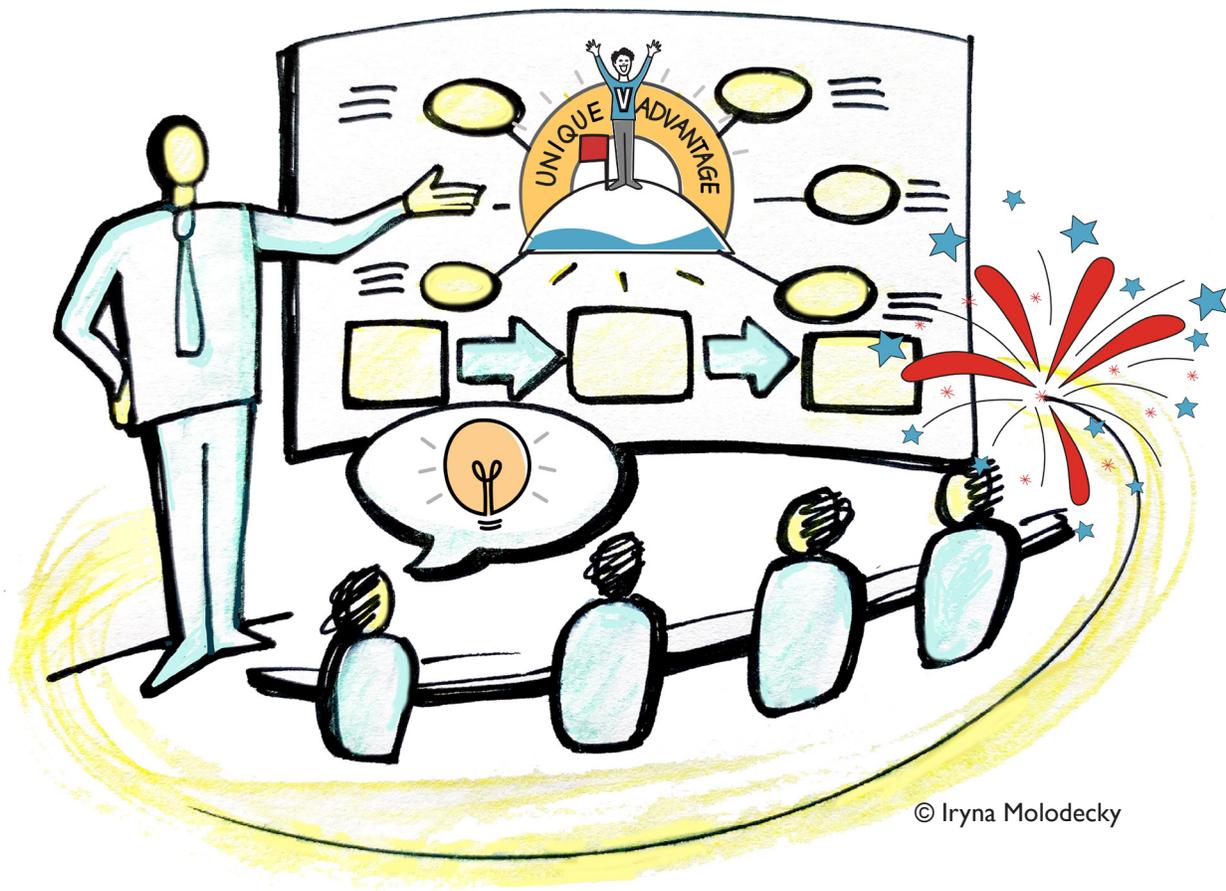


VISUAL TOOLKIT

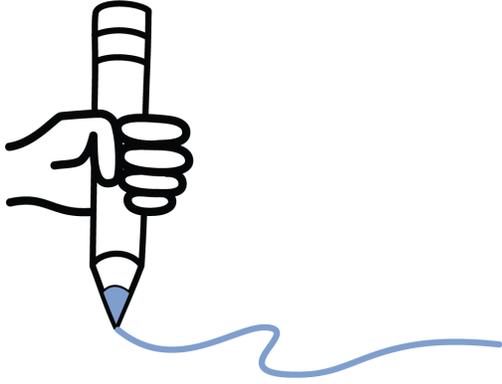
FOR TEACHING BUSINESS

Visual Teaching and Learning Strategies
that Enhance Learning for Business Students

OVERVIEW



© Iryna Molodecky



Did you know that drawing is a natural form of communication that has been used since the beginning of time?

Children learn by drawing before they can write. But once we learn to read and write words, our educational system discards the value of drawing, classifying it as a creative expression mainly for children and artists.

Thus, many young people have lost the ability, skill and confidence to communicate through drawing.



BACKGROUND

In this new digital global economy, where visual content has become the driving force behind marketing and communication, innovative businesses are recognizing the value of communicating and solving problems using visuals. More and more, they are engaging with visual tools such as drawing and graphical representations of data and ideas to streamline communication, enable more complex levels of discussion and unlock innovation and breakthrough thinking. Visual meetings using a variety of visualization strategies, including graphic facilitation and visual note taking, are rapidly becoming an integral part of the business collaboration process (Sibbet, 2010).

This led me to wonder if business schools, particularly the Pilon School of Business (PSB) at Sheridan College where I was a full-time faculty member, are incorporating visual methods in preparing students for the business world they are entering. With its slogan “Get Creative,” Sheridan College is well known for making creativity a priority. In fact, creativity is embedded in every program throughout the college’s campuses, including the Pilon School of Business where I taught Advertising Creative courses and “Creative Thinking: Theory and Practice,” required courses for students in the Advertising Diploma program.

The role of education, it has been argued, is to develop self-actualized individuals by fostering students’ creativity. Creativity is the ability to generate ideas that are original and have value. A critical aspect of creativity is imagination. Davis (1991) proposes that imagination is innately linked to the mental and physical activity of visual imagery (which includes scribbling and sketching). Laura Otis (Psychology Today) suggests that “creative ideas emerge when visual thinking (seeing words as pictures) meets verbal communication”. In order to accurately express what one is thinking in pictures, one has to have access to a “visual language”. Robert Horn (1998), who coined this term, defines visual language as “language based on tight integration of words and visual elements’...(e.g., icons, clip art).” It is a system that uses mostly images or symbols to convey meaning.

Since it is well-documented that there is a connection between creativity and visual thinking, I was curious to find out whether this was being acknowledged and addressed by the PSB faculty. My belief is that business teachers who embrace visual thinking and visual language will not only engage learners more effectively, but will also provide them with a unique creative advantage in the future—especially in workplaces such as Marketing and Advertising where communicating with visuals will be integral to their success.

My Personal Experience Integrating Drawing into Courses

As a graphic designer, art director and visual facilitator, I had already been using drawing in my classroom to explain concepts and record discussions graphically on large sheets and whiteboards. I could see the value that active real-time drawing had in engaging my students as well as in aiding comprehension—they instantly understood the concept when I drew it and engaged more fully when they saw their words recorded graphically (see Figure 1). I began teaching my advertising students a basic visual vocabulary by using simple shapes so they could develop a level of comfort with this form of communication (Figure 2). I saw their confidence and engagement grow with comments, such as, “I love that you let us draw. It’s so much fun drawing with everybody, and actually helpful” (personal communication with first year Advertising student, 2021).

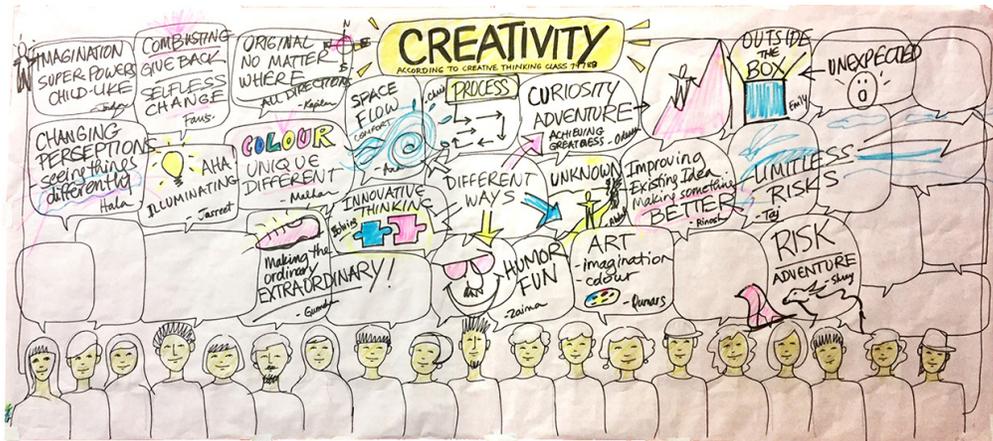


Figure 1: Recording of Creative Thinking class discussion on the definition of creativity, Sheridan College, 2018.

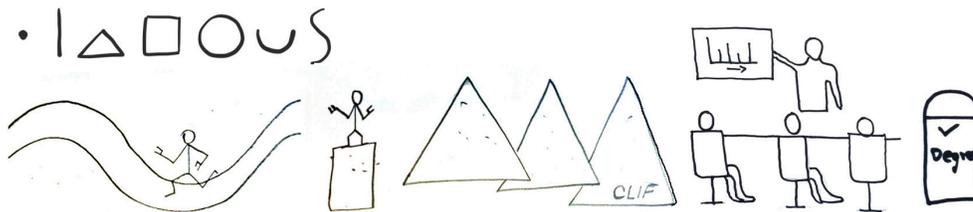


Figure 2: Students practice drawing their advertising ideas using basic shapes.

Seeing in action how powerful this learning tool can be, I wanted to make it available to all instructors in the Pilon School of Business. Armed with a vision to create a more meaningful learning experience in our business school and to keep pace with the business world, I set out to develop a Visual Toolkit for Teaching Business, designed to prepare students with visual skills for the current business world.

With a focus on visual language for the purpose of communicating thoughts and ideas, this unique Visual Toolkit for Teaching and Learning Business, developed for Sheridan College's Pilon School of Business (PSB), was designed to honor the spectrum of experiences and benefits freehand drawing as a language offers. It covers multiple ways that hand-drawn imagery can be used in business courses to enhance the learning experience.

Included in the Visual Toolkit are:

- an animated introductory video and poster
- a visual vocabulary guide
- a library of 90 simple easy-to-draw business icons with drawing instructions
- visual templates for use in individual and collaborative work
- drawing and doodling exercises to unleash creative thinking

From teacher-led visual templates for use in collaborative work to individual reflective doodling exercises, the Toolkit is designed to encourage freehand drawing as a visual language to express and communicate concepts, ideas and thoughts, access creative thinking, and to explore multiple ways of understanding. Requiring no artistic talent, the Toolkit's visual vocabulary, icons and templates use simple shapes that can be easily reproduced by both faculty and students. The aim of these tools is to help business students develop the visual language skills needed to excel in the organizational workplace of the future.

DEVELOPMENT OF THE TOOLKIT

I approached the design of this toolkit by first researching three key aspects: 1) the current use of visual tools among PSB faculty, 2) the use of visuals in the current business environment, and 3) the effectiveness of drawing as an educational tool.

I. PSB Study

To begin the research, a questionnaire was sent to all full and part-time faculty in the Pilon School of Business. Among the 10 questions asked were inquiries into faculty and student level of comfort with visuals, whether faculty was aware of the use of visual tools in business today and whether they believe teaching visual thinking (learning and processing with visuals) will better prepare students for the current business environment (see Figure 3).

VISUAL STRATEGIES IN TEACHING & LEARNING

VISUAL SURVEY QUESTIONNAIRE

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PURPOSE: To identify extent and type of visual teaching strategies currently used by faculty in the Pilon School of Business

VISUAL TEACHING AIDS: All types of aids that makes learning happen through visuals.

VISUALS: This will refer to photos, drawings, illustrations, graphics, video, film, artifacts, props –any 2D or 3D element that is used to explain or enhance text or verbal communication.

1. Select from the drop down menu the program you teach in.

2. My slide presentations incorporate visual images to communicate messages.
a. Less than 10% (predominantly text with little or no visuals).
b. 10-39% (a few images throughout)
c. 40-60% (a good balance between images and text)
d. 61-80% (skewed more towards images)
e. 81-100% (predominantly images with little or no text).

3. I incorporate some form of visuals in class activities.
a. Never
b. Rarely
c. Sometimes
d. Often
e. Always

4. I use the following types of visuals in my teaching. Click on all that apply.

5. My level of comfort using visual tools in teaching is: (1 = no comfort; 10 = very comfortable)
1 2 3 4 5 6 7 8 9 10

6. My students' level of comfort using visual tools in learning is: (1 = no comfort; 10 = very comfortable)
1 2 3 4 5 6 7 8 9 10

7. I see students drawing or doodling when taking notes.
a. Never
b. Rarely
c. Sometimes
d. Often
e. Always

8. Visuals are becoming increasingly important in today's business settings (for example, meetings that use visual tools for greater effectiveness and productivity).
a. Strongly Agree
b. Agree
c. Neutral
d. Disagree
e. Strongly Disagree

9. Teaching visual thinking (processing and communicating information using visuals) is valuable in preparing our students for their future careers in business.
a. Strongly Agree
b. Agree
c. Neutral
d. Disagree
e. Strongly Disagree

10. Workshops and teaching aids would be beneficial in helping me integrate visuals effectively into my teaching.
a. Strongly agree
b. Agree
c. Neutral
d. Disagree
e. Strongly Disagree

Figure 3: Survey questionnaire sent out to Pilon School of Business faculty, February 2020.

There was a total of 65 respondents, most of them teaching in the Undergraduate Diploma and Bachelor Degree programs. The study, conducted in February 2020, showed that an overwhelming 85% of those polled agree that visuals are becoming increasingly important in business settings and that teaching visual thinking (information as graphics) is valuable in preparing students for their future careers in business. Yet only 53% of the Business faculty polled include visuals on a regular basis in class lectures and activities. Of those 53%, over 80% use charts and photos while 59% have used drawing as a tool to explain concepts (see Figure 4).

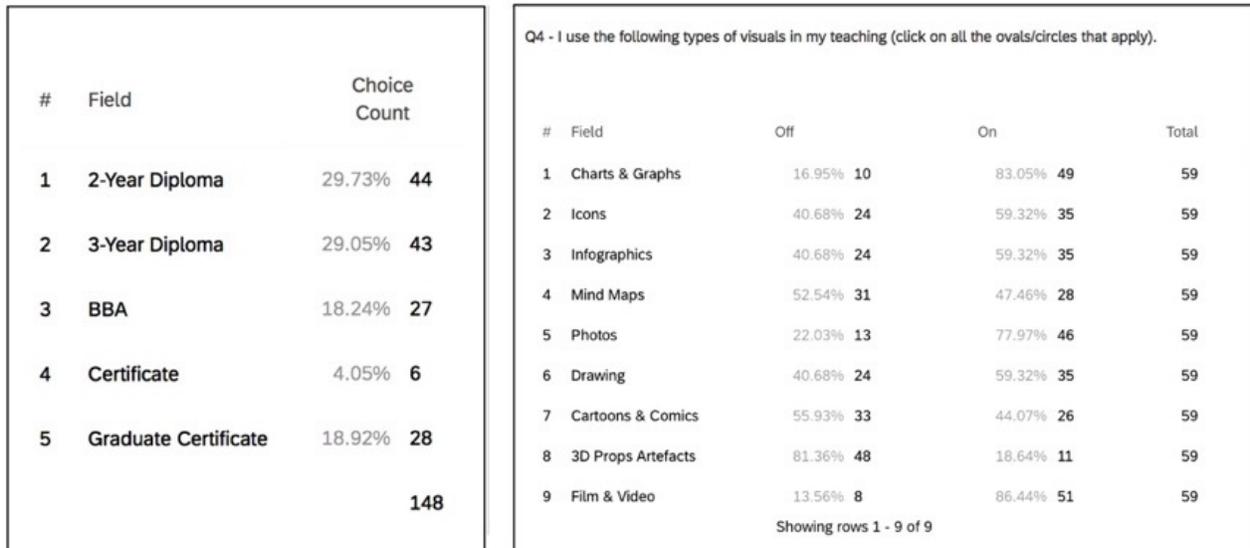


Figure 4: Survey results: Q1:What program do you teach in? and Q4:I use the following types of visuals in my teaching.

I noticed that those respondents who teach in the Advertising or Marketing programs had higher scores, most likely because they have a greater fluency with visuals. Those who teach in the BBA (Bachelor of Business Administration) or Graduate Certificate Programs had a tendency to avoid using drawing altogether. Reasons given were their perceived lack of drawing skill and creativity and a belief that drawing is a more suitable learning tool for children and artists. The results of this survey led me to include drawing exercises and instructions in the Toolkit to help instructors become more comfortable with drawing as a visual language.

2. Use of visuals in Business

Studies show that visual content in marketing is on the rise and businesses are realizing that reaching today's customers requires visual language skills (Venngage, 2020). Representing information using text and graphics, commonly known as "infographics", has made its way into the business environment as an increasingly popular way to concisely communicate data and information. Entrepreneurs are appreciating the power of visualizing data in telling their stories and innovative businesses are engaging with visual tools to solve problems within their organizations. Visual meetings that use graphic lists, mind maps, charts, diagrams, graphic facilitations and recordings are now part of the organizational landscape. From planning and visioning forums to brainstorming sessions, companies have found that facilitating meetings with the use of graphics allows everyone to literally see what is being discussed and gets everyone on the same page. Visually rich recordings like the one in Figure 5 capture the essence of conversations, increase clarity and enable more complex levels of dialogue among team members.

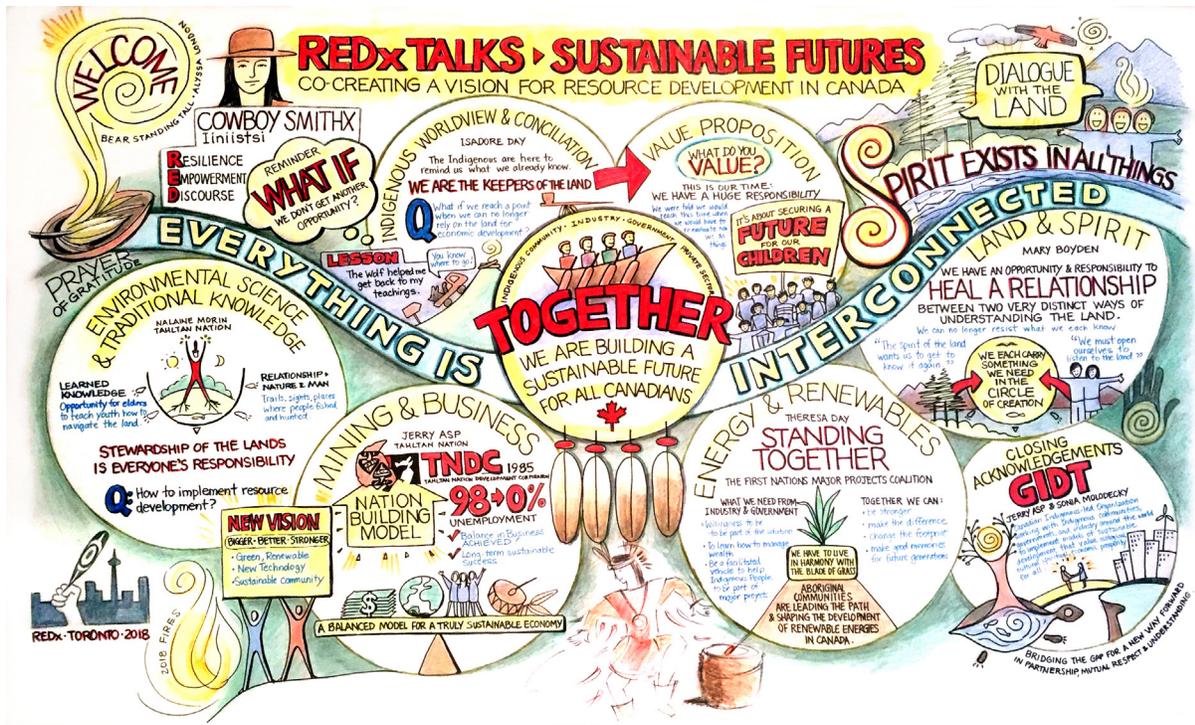


Figure 5: Graphic recording of REDx Talks on Sustainable Futures with resource development firms, Toronto, 2018. © Iryna Molodecky

Seeing their discussion captured visually in real time energizes teams and results in greater collaboration and breakthrough thinking, especially around complex systems problems where big-picture systems thinking is required. According to Sibbet (2010), graphic language and systems thinking are interconnected. In fact, he suggests that graphic thinking is the doorway to (and possibly the essential language of) systems thinking. The use of hand-drawn visual metaphors, such as weather forecasts, icebergs and roadmaps, often used in visual facilitation, can reach to the heart of an issue, offer insight, and guide groups and individuals through the process of reflection, direction setting and planning. This is the visually-rich organizational environment our Business students are graduating into.

3. A case for drawing as an educational tool

A natural form of communication, drawing is an important tool within the spectrum of visual communication and fits the International Visual Literacy Association's definition of visual literacy as a linguistic tool that allows you to read, write and create visual images. Unlike written or verbal language, a simple visual representation using pre-existing shapes, icons or metaphors that are universally recognized can communicate unfamiliar information in a way that makes it seem familiar. Thus, a simple hand-drawn sketch has the ability to cut across barriers of culture, race and identity and connect with the greatest number of learners, regardless of the course of study. It's a language that supports Universal Design for Learning.

As an educational tool, drawing has multiple applications and can be used in many different ways for a variety of different goals. For the purpose of this Visual Toolkit, the application that is most relevant is the process of making meaningful marks with a drawing tool in order to aid in communication, student engagement and comprehension. The quality of the drawing or the talent required is not important.

A recent study conducted at the University of Waterloo found that participants remembered double the number of drawings versus words. According to Wammes et al, this is due to the fact that drawing taps into three areas of the brain (visual, kinesthetic and linguistic) at the same time, establishing more connections in the brain and encoding information more deeply. They observed that the quality of the drawings doesn't matter, suggesting that anyone can benefit from this memory strategy, regardless of artistic talent. This suggests that when learners actively draw their notes, they more fully engage with the information and thus understand and retain more.

Drawing as an educational tool can also help students develop creative skills. According to the Torrance Test for Creativity, fluency, flexibility, originality and elaboration are skills of highly creative people. Drawing naturally increases your idea production (fluency), helps you develop new ways of seeing (flexibility), allows for unexpected sources of inspiration (originality), and offers opportunity to embellish, refine and improve on the original idea (elaboration). Unlike the use of other visual media such as photos (which although they are open to interpretation, are complete when presented), drawing is open-ended and fluid and allows for internal and external input throughout the process. As a language, drawing can be likened to bilingualism, supporting both intentional, mindful creations as well as intuitive, mind-wandering processes.

Where drawing is generally an active and deliberate process, doodling is more passive and reflective. Doodling frees your mind to wander, play, imagine and can put you in a state of flow, heightened focus and awareness – characteristics of creativity. Students who draw are intuitive and imaginative, keen observers, see the big picture, can see unusual solutions and have a greater potential for creativity. Studies show that doodling while listening actually serves a purpose and helps some learners integrate the information they are hearing. Sunni Brown (2014), the self-proclaimed leader of the 'Doodle Revolution', proposes that doodling is deep thinking in disguise. Her definition of doodling is "to make spontaneous marks to help yourself think."

My research on the value of freehand drawing in both business and education supported my focus on developing a toolkit for business educators that centered around hand-drawn imagery. With a goal of preparing students for the business world they are entering, I looked at multiple ways that drawing and doodling could be used in curriculum to enhance the learning experience for business students.

VISUAL TOOLKIT

FOR TEACHING BUSINESS

EXPLAINER VIDEO & POSTER:

An introduction to the importance of visual use in business education, this seven-minute whiteboard animation video, entitled “How Visuals Transform Learning for Business Students,” introduces the importance of visual use in business education.

The video and associated poster are reference tools for Business faculty and cover how visuals:

- 1) comply with current communication trends
- 2) connect with our natural ability,
- 3) support Universal Design for Learning,
- 4) increase retention of information,
- 5) increase the speed of communication,
- 6) heighten thinking levels, and
- 7) increase engagement and participation.

The video can be viewed at <https://www.izmvisuals.com/visual-toolkit>. The associated poster is available for download.

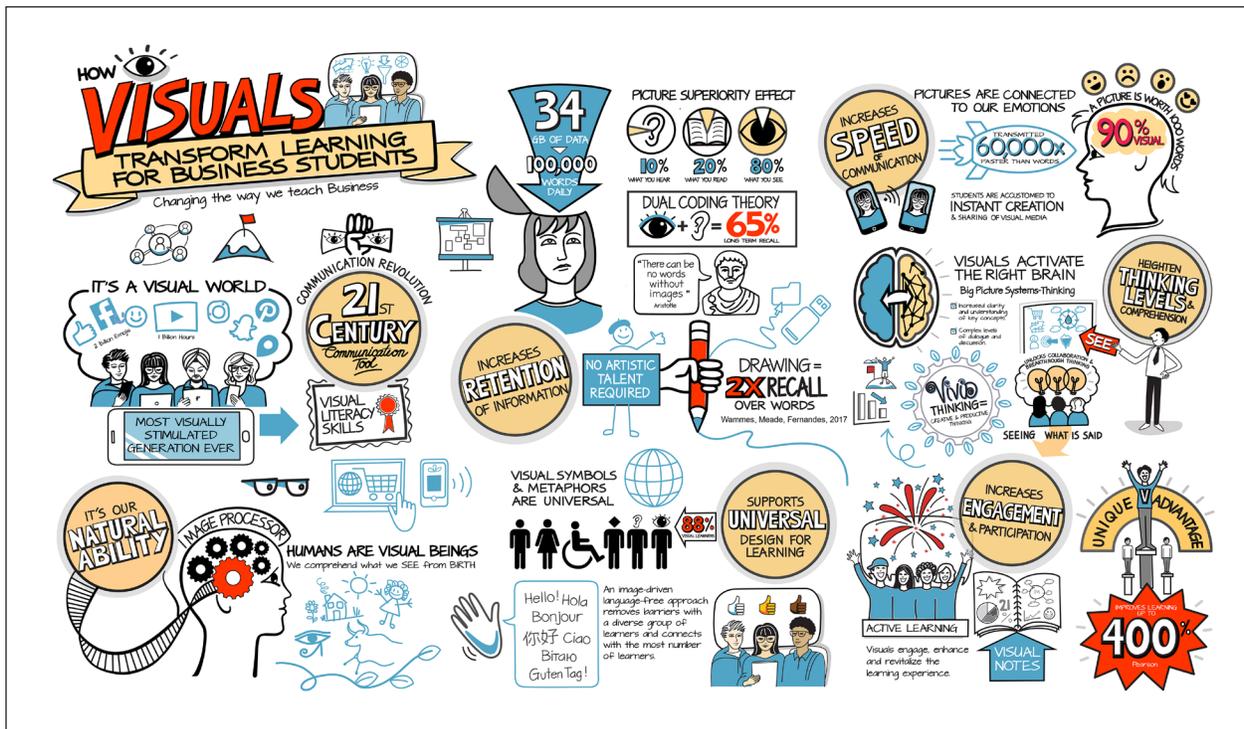


Figure 6: “How visuals transform learning for business students” Poster from the video. © Iryna Molodecky

VISUAL TOOLKIT

FOR TEACHING BUSINESS

VISUAL VOCABULARY

Inspired by the Periodic Table of Visualization⁷ and Visual Data Vocabulary, the Toolkit's Visual Vocabulary poster presents an overview of the four basic categories of visualizing data and information: 1) Data 2) Information 3) Concept 4) Metaphors (see Figure 6). Choosing the right category or format gives structure to the learning, can help shape the conversation that emerges and can support the different types of thinking through the different stages of a project. Merging images with data helps business students connect the dots in their comprehension.

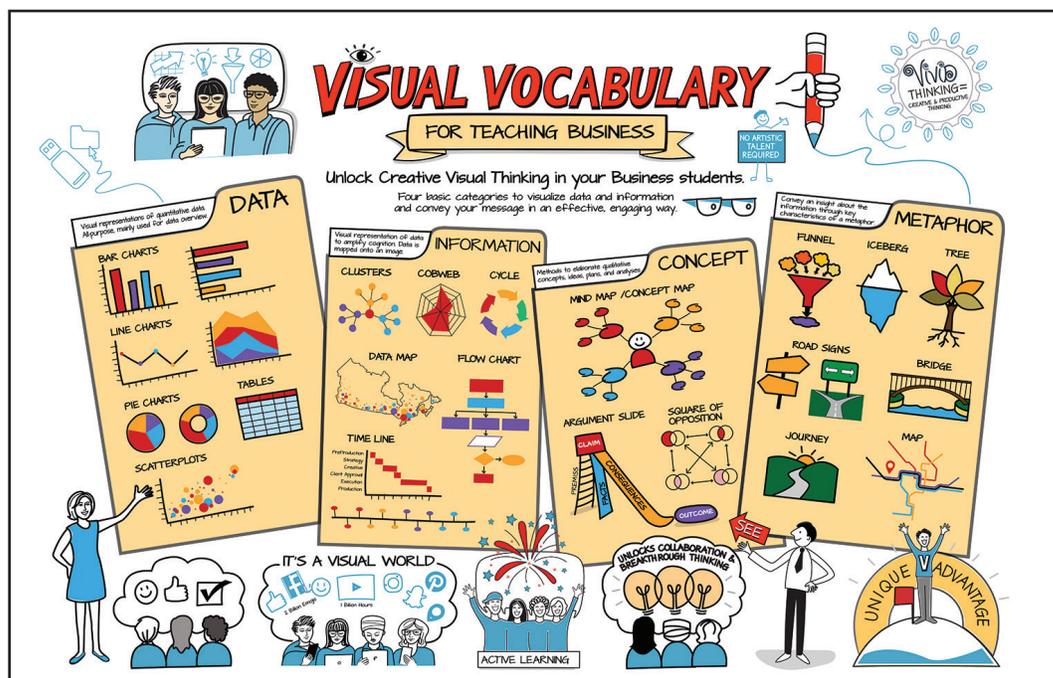


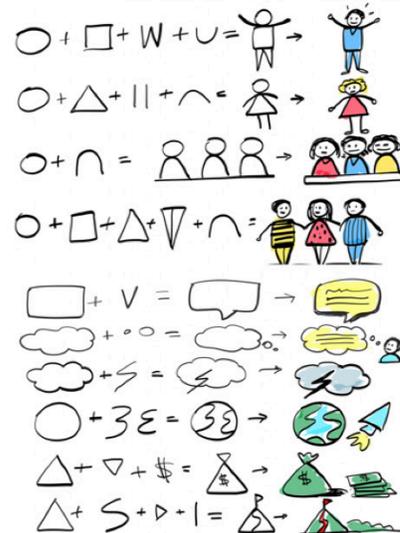
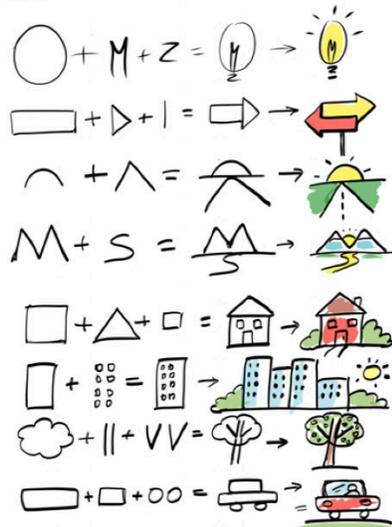
Figure 7: Visual Vocabulary Poster © Iryna Molodecky

According to Horn (1998), visuals are emerging as a language because of the growing need in today's world to deal with complex issues that can't be expressed easily with words. The Toolkit's Visual Vocabulary provides the components of that language, also supplying instructions on how to construct icons using nine basic shapes: a dot, line, triangle, square or rectangle, circle or oval, the letters U, V and S, and a cloud. It provides examples of 90 common business icons that can be used by instructors or learners (see Figure 8). The intention is to make the process of drawing and working with hand-drawn visuals less intimidating for both. These instructions will be incorporated into other material within the Toolkit such as the Visual Notebook for students and Faculty Workshops.

VISUAL TOOLKIT

FOR TEACHING BUSINESS

You can draw anything using these nine basic shapes

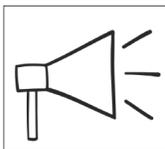


VISUAL VOCABULARY

FOR TEACHING BUSINESS

90 common business icons
for use in teaching and learning Business.

The following icons are a compilation of simple drawings for a variety of business concepts and metaphors that can be used for communicating ideas using visual language. Using simple shapes such as a line, square and circle, these icons are easy to reproduce for both instructors and students. They are presented in alphabetical order for quick referencing. Detailed instructions and tips on how to easily draw basic icons are provided at the end of the vocabulary.



ADVOCACY



AGENDA



ANALYSIS



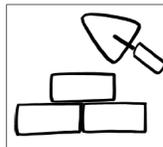
ASSETS / INVESTMENTS



BRAINSTORM



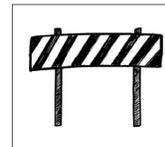
BRAND



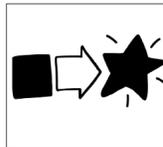
BUILD



BUSINESS



CHALLENGE



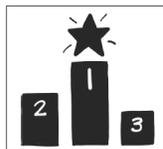
CHANGE



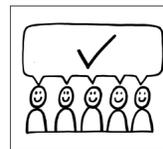
COLLABORATION



COMMUNITY



COMPETITION



CONSENSUS



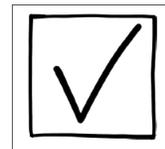
CONSUMER



CURRENT STATE



DATA



DECISION

Figure 8: Instructions on how to construct icons using the 9 basic shapes and some examples from the Icon Library. © Iryna Molodecky

VISUAL TOOLKIT FOR TEACHING BUSINESS

VISUAL TEMPLATES

An important element of the Visual Toolkit is the visual template. Templates are one of the key visual strategies used in business meetings and offer structure, framework and support in leading people through a process. Templates can be customized to support the thinking at various stages of a project and are particularly suitable for systems process work where teams need to collaborate and brainstorm solutions to complex business problems. The templates within this toolkit are organized into four categories for teaching and learning: Teacher-led, Learner-led, Individual Work and Group Work (see Figure 9).

LEARNER-LED	Individual learner created and controlled for individual use. - Note-taking - Assignments	Learner group created and controlled for group's use. Learners create the outcome. Instructor can design the process. - Mindmaps - Brainstorming
	INSTRUCTOR-LED	Visuals created and controlled by instructor for individual learner's use: - In-class activity templates - Assignment templates - Reflection - Client/Speaker notes - Explanation/Assignment critique
	INDIVIDUALS	GROUPS

Figure 9: Matrix for categorizing the templates in the Visual Toolkit.

The templates utilize metaphors and are structured within a creative thinking/problem solving model framework commonly used in organizational settings to realize specific goals. These include vision or goal setting, gathering information, exploring and generating ideas, developing solutions, and implementing the solution or prototyping. They incorporate visual formats that best correspond to the type of process work and thinking required (collaborative or reflective, divergent or convergent thinking) and include journey maps, concept maps, mandalas, and matrices (see Figure 10). These visual metaphor templates are designed to inspire visual thinking and freehand drawing. They are simple and easy to reproduce by both teachers and learners. Twelve basic templates have been created to date, and more are planned with the collaboration of faculty to suit the needs of a variety of business programs.

VISUAL TOOLKIT

FOR TEACHING BUSINESS

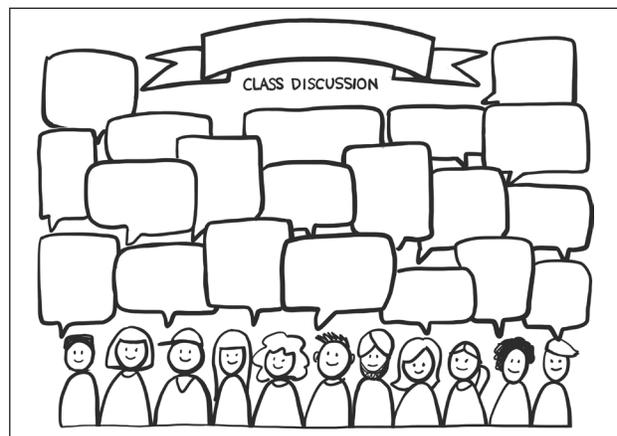
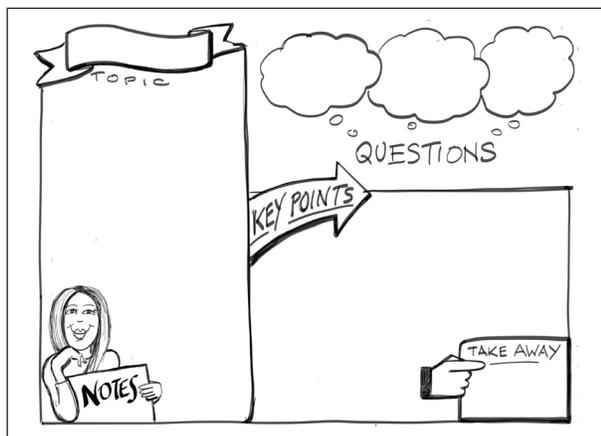
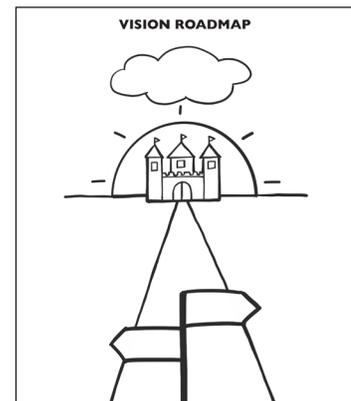
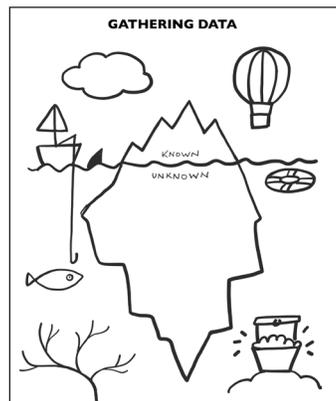
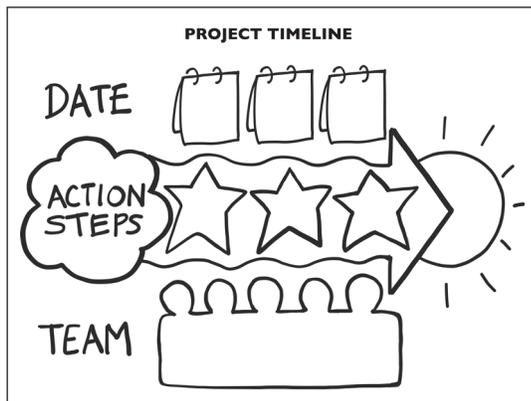
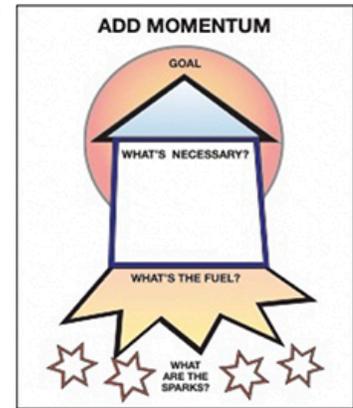
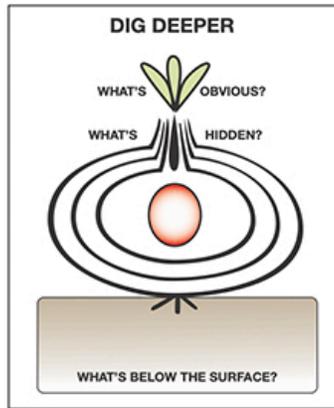
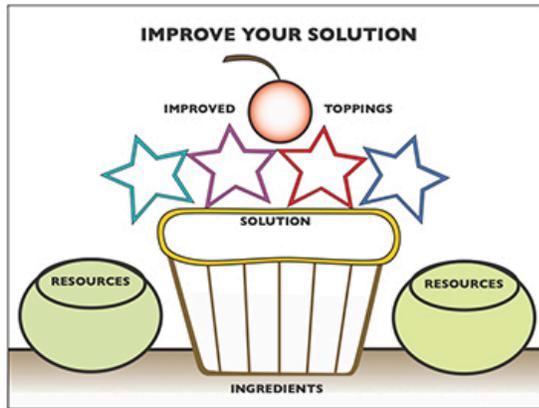


Figure 10: Examples of some of the visual templates in the Visual Toolkit. © Iryna Molodecky

VISUAL TOOLKIT

FOR TEACHING BUSINESS

DRAWING EXERCISES

The purpose of these exercises is to harness drawing across the full spectrum of learning experiences, from reflection and insight generation to creative problem-solving. Each exercise develops skills and abilities that supports optimal creativity. They correspond to the four categories of the Visual Template Matrix.

Exercise I

Reflection: Learner-led/ Individual

Purpose: Mind-wandering doodling, developing intuition, inner awareness, state of flow.

Creativity Skill: Fluency (increases idea production), flexibility (develops new ways of seeing), originality (allows for unexpected sources of inspiration), elaboration (offers opportunity to embellish, refine and improve on original doodle).

Exercise: Write down a question or situation you need clarity on (assignment-related or personal). Draw seven dots randomly on the page. Connect the dots with a continuous line without lifting your pencil off the paper. Keep going over the doodle for 5-15 min. writing down everything that comes to you while doodling. Another option is to close your eyes and choose a colored pencil or marker at random. Draw/doodle with your eyes closed. Keep choosing different colored pencils at random with eyes closed until you feel you are done. Open your eyes and interpret what you have drawn. If inspired, you may start filling in the shapes and observe your doodle take shape and form. Add words or other shapes, colours as they come to you (see Figure 11).

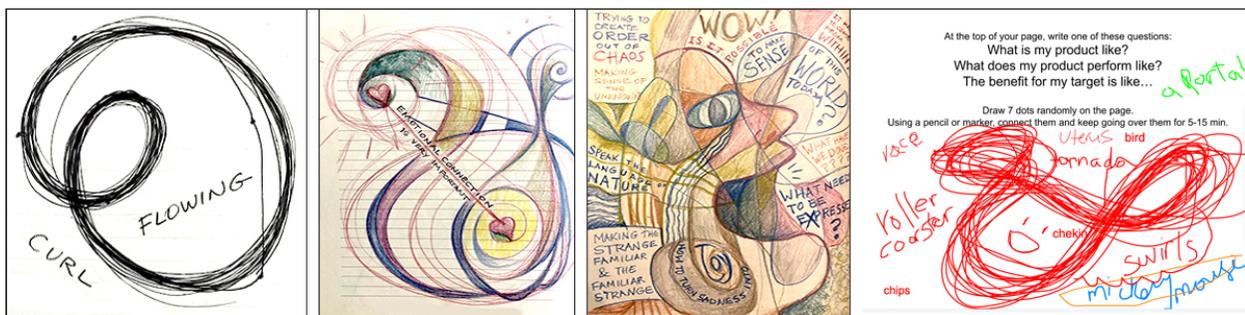


Figure 11: Examples of individual doodle exercises from simple to elaborate and one done during an online class. © Iryna Molodecky

VISUAL TOOLKIT

FOR TEACHING BUSINESS

Exercise 2

Generating Insights: Learner-led / Group

Purpose: Mindful group doodling, group brainstorming, warm up for creative thinking.

Creativity Skill: Fluency (increases idea production), flexibility (develops new ways of seeing), originality (allows for unexpected sources of inspiration), elaboration (offers opportunity to embellish, refine and improve on original doodle).

Exercise: In groups of four, start with a challenge question for your assignment. Fold a piece of paper in half length-wise and then into four, like an accordion so you have eight squares. Each person draws a shape or color in one square then passes to the person on the left. That person draws in the next square what comes to them based on their own insights and inspiration from the previous drawing(s). When all eight squares are filled, the team looks at all completed drawings and interprets what the combined full drawing is communicating. This is similar to the brainstorming technique called “Brainwriting”. Options include filling in circles or combining shapes as a group.

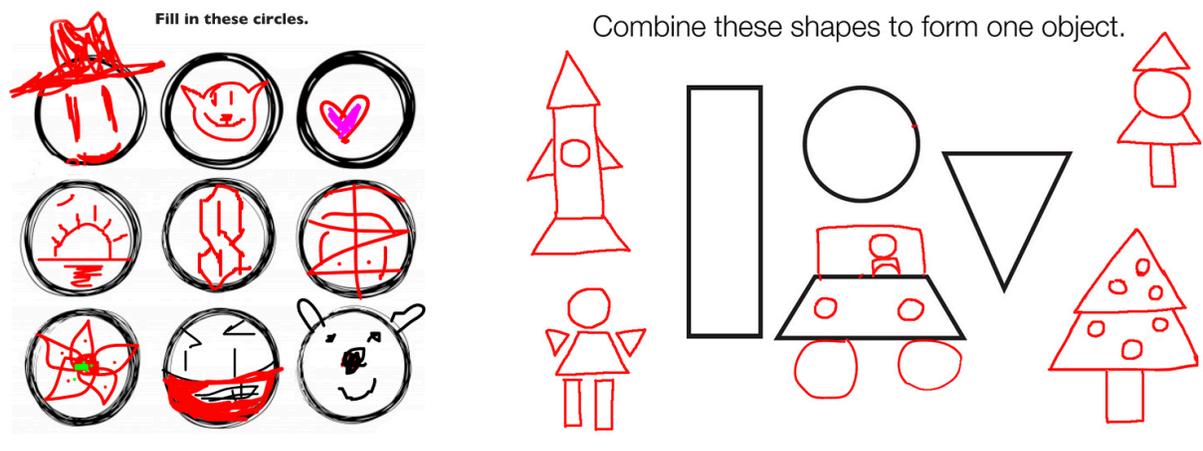


Figure 12: Student group warm up exercise prior to working on an advertising problem.

VISUAL TOOLKIT

FOR TEACHING BUSINESS

Exercise 3

Creative Problem-Solving: Instructor-led / Group

Purpose: Brainstorming warm-up, collaboration, tapping into both sides of the brain (logical and imaginative).

Creativity skill: Flexibility (use of two hands and two sides of the brain simultaneously), originality (allows for unique ways of collaborating).

Exercise: Each student receives one sheet of paper and two pencils or markers. They choose a picture of a simple object to draw. They are instructed to draw normally with their dominant hand and simultaneously in the opposite direction with their other hand, creating a mirror image. Students are then asked to partner up with one other student. One student takes the lead and begins to draw while the other student follows in mirror image. They take turns being the lead drawer. This is a fun warm up exercise for collaboration.

Exercise 4

Note taking: Instructor-led / Individual

Purpose: Visual note taking and mind mapping. Gathering and recording data. Information being recorded in a visual way that is unique to the learner.

Creativity skill: Flexibility and elaboration (words, images, graphics, colour), originality (allows for learner's unique way of interpreting the information they are hearing).

Exercise: The instructor presents the topic for the lesson and shows a related picture. Learners are invited to create a doodle on their page that is inspired by the topic and then to record their lecture notes within the structure of the doodle they created. Additional doodles, drawings, graphics and colour may be added while listening. (see Figure 13).

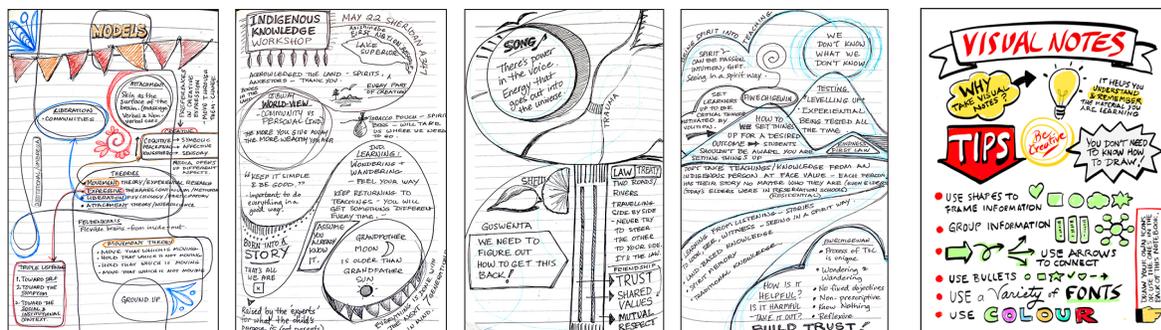


Figure 13: Notes created using a doodle format. Tips on how to create visual notes. © Iryna Molodecky

VISUAL TOOLKIT

FOR TEACHING BUSINESS

FACULTY WORKSHOP

Sunni Brown (2014) believes there is value in teaching adults how to sketch and draw for the same reason that people learn to write in another language. Being fluent in visual language, like any other language, gives us the ability to communicate in ways we would not normally be able to.

A workshop introducing the Visual Toolkit to Business faculty will increase their comfort levels with visual aids and hand-drawn visuals. Topics covered include:

- 1) Why visuals are important in teaching Business: applications of visual tools in Business settings,
- 2) How to draw simple business icons: the nine basic shapes that will allow you to draw anything,
- 3) How to apply visual process work in the classroom using hand-drawn templates, and
- 4) Examples of lesson plans / modules that incorporate the use of freehand drawing into the lesson.

The workshop is graphically facilitated, and a visual recording of the session(s) can be posted on the school's internal site for faculty to download.



CONCLUSION

According to the 21st Century Competencies for Ontario (2016), there is a call for education systems to deliberately change curriculum design and pedagogical practices in order to prepare students to solve messy, complex problems, associated with living in a competitive, globally connected and technologically intensive world. Drawing, as a simple, natural and readily available visual teaching tool, answers this call for more creative thinking. Through my research and work in compiling the visual toolkit, I am convinced that business students who are fluent in the language of visuals and can easily communicate through drawing, will not only have a unique competitive advantage in the business world of the future but will also be more engaged and empowered contributors, collaborators and co-creators, affecting positive change in the world.

Although there is an openness by business faculty to embrace visual thinking, there is still resistance of some to draw. Blijssie et al (2019) present three strategies for navigating this resistance: 1) Draw live, 2) Use templates and 3) Get a marker in people's hands. They believe that it is through using our hands that we become more creative, connected and productive. Using a drawing tool such as a colored marker instead of a writing tool encourages our brains to come alive, to visualize rich stories, narratives and possibilities that can't be achieved as effectively on the computer or with a writing tool. Dan Roam (2009) showed the business world how visual thinking using simple drawings can help anyone overcome their fear of drawing. Furthermore, he suggests that talking less and drawing more increases effectiveness, productivity and participation. He calls it "Vivid Thinking".

So, let's inspire and engage our business students by drawing live and using hand-drawn templates. Let's use this natural and available means of communicating to help our students be more productive and have richer and more creative collaborations. Let's keep pace with the business world by incorporating the powerful tools of visual thinking and drawing into business education.

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