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Boosting students' creativity through visual *bricolage* of experiences – how visual collage boards help students in expressing their knowledge during online classes

Abstract

The objective of this study is to present various practical applications of collage-based methods (visual *bricolage*) as a way of boosting creative discussions with students and helping them to express their knowledge and experience using visual representation.

This viewpoint paper is based on the experience of twenty classes conducted with the MA program and postgraduate students at Kozminski University between March 2019 and December 2021, when online whiteboards and visual metaphors were used. The method used was participative observation, as the author also acted as the workshop facilitator. To observe the user's action, the contribution tracking tool that is available on the mural whiteboard (Mural, n.d.) was activated.

The explorations during the workshops revealed two elements of online classes: Conceptualization vs Illustration, to determine whether photos and pictures serve as an instrumental illustration in the background of the story, or they are important elements that convey the sense of the students' statements.

Moreover, the paper contains various practical findings that help to facilitate creative educational workshops remotely.

Keywords: online teaching, creativity, creative explorations, creation, visual metaphors

Introduction

“The ability to see is one of the truly remarkable characteristics of living beings. It enables them to perceive and assimilate in a very short time an incredible amount of knowledge about the world around them” (Netravali, 1995, p. 1). This quotation explains why on the road to finding innovative teaching methods we should reach for visual projective techniques that create spaces for the application of metaphors and enable social learning opportunities (Bandura, 1977).

The purpose of this viewpoint paper is to share the experiences with the practical applications of visual collage-based methods such as vision boards, concept posters, mood boards, and more structured forms such as ‘streams of photos’ for academic teaching, and explain how to incorporate them into the teaching practices in the area of Management.

The structure of this paper is as follows: firstly, a theoretical explanation of the collage techniques will be given, then the technical and practical recommendations about the workshop design will be shared to combine the viewpoint paper with ready-to-implement teaching practice in the virtual environment.

Setting the scene – context for the introduction of online creative methods

In March 2020, a series of national lockdowns meant that academic courses suddenly needed to be conducted remotely. This required a rapid transition to online tools,

while not failing to observe the university quality paradigm to maintain a high level of engagement for students that attend classes through interactivity and design a space for social collaboration (Kazerounian & Foley, 2007).

In the context of creating a good learning experience for students, we had the perception that we wished to break computer-mediated anonymity and technological dominance of learning software such as MS Teams or Zoom. According to the Social Construction of Technology theory (Bijker et al., 2012), we can mediate the space that was in this case unexpectedly overwhelmed by technical instruments of communication. The approach to this study also supports the attitude that human actions shape technology and formulate new meanings in the system. Embedding tools such as visual collages are in line with social constructionism theories.

Also, apart from the social construction of reality discourse in view of new teaching tools, the aim was to introduce abstract visual forms into lectures to form a space for creation for students (Soñta & Magala, 2020) and let them experience the playful environment of experimentation (Gauntlett, 2007), and feeling of 'creating things', as making is connecting, even in the virtual environment (Gauntlett, 2018).

In this paper, through the application of the participatory observations of the group dynamic during the creative activities in traditional classes, practical conclusions have been drawn. The participant observation (PO) is related to the role of the facilitator. When facilitating, this person is responsible for not only framing and streamlining the online discussion (Denzin & Lincoln, 2011) but also it is expected to intervene when the conversational frame is not transparent to the participants. The observations were collected between March 2019 and December 2021 during courses in Innovation Management, Business Plan, Sustainability, Cross-Cultural Management, and Communication in the Age of AI at Kozminski University. All classes were conducted in English via the MS Teams platform. The findings derived from observations are supported by the additional interpretations of the patterns of interaction and individual contributions of the students on the Miro and Mural online whiteboard.

The emphasis of reflections in this paper is on the visual representation and responses of the students when telling their stories and working on metaphors. This means that students express their thoughts on abstract topics such as Sustainability in Business through the description of their experiences as they construct metaphors and share their stories about their experiences in the topic, combining it with the knowledge around theoretical concepts they gained in the class. Drawing on this approach, to gain reflexive insights, the students need to combine their theoretical knowledge and individual experiences and let themselves imagine and get creative in interpretations to tell their stories.

Key terms: visual metaphors, *bricolage*, and metaphor-based storytelling

Metaphors: The human ability to see through metaphors

The ability to interpret makes us human. A machine cannot see, it rather 'views' particular information, and this is not out of curiosity, but because a human gave it an order to 'view' a certain space (Pasternak, 2007). The output is with data, however, it is a human who finds analogies and interprets data, and adds a story to explain the patterns that are visible in the data set and have been viewed and recognized by the machine. Machines do not understand this interpretation. What is more, when we 'see', we search for our memories and recall our human experiences, and this, combined with human curiosity, helps us to find a solution to a challenge and complete business tasks.

Before the pandemic, the innovative didactic classroom equipment such as traditional whiteboards and physical post-its/ sticky notes were used to make the classroom experience more interactive and participative for students. There were aimed at involving students in taking part in the discussion to express their stories in a different than text-oriented way. Storytelling was applied at rather an instrumental level, usually during the final presentations, and even then presenting a narrative was optional, as an element of being proficient in making presentations.

The visual *bricolage* introduces a more abstract way of expressing students' opinions and creates a space where the interpretation is created entirely by them, and not the teacher. More interestingly, reflexive storytelling appears much more often, as the workshop participants need to bridge their experience and knowledge and the tangible insights that are expected to be shared with the rest of the course participants. The flow of the discussion in the class is in line with the scheme presented in Figure 1.

To name the parts of the process explicitly, this process can be translated to expose the stages:

1. Random reflections on the topics (Reflection).
2. Attaching various pictures to thoughts (Image generation).
3. Selecting the metaphors (Selection).
4. Building stories (Storytelling).
5. Sharing stories framed adequately for the context of a formal education workshop (Contextual adaptation & Presentation).

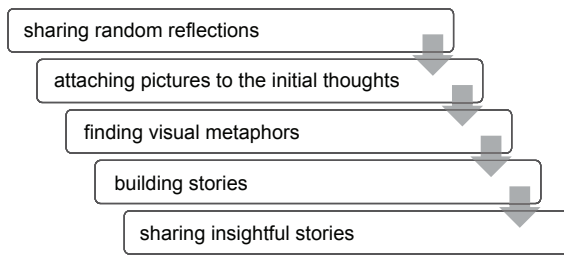
Both creating a metaphor based on visual inspiration and sharing the final story are necessary components, as "[b]oth narrative and metaphor provide mechanisms for making sense of the world. While metaphors elaborate and articulate particular points in a narrative, the narrative provides meaningful connections between sometimes unrelated metaphors, suggesting a symbiotic relationship between the two" (Farquhar & Fitzpatrick, 2019, p. 3).

The concept of metaphor as the 'assumptive frameworks' or 'systems of associated commonplaces'

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Figure 1

Creating a visual metaphor-based story scheme



Source: author's own work.

was introduced by Max Black (1955, 1977). His research emphasized the role of intuition or intuitive thinking when ascribing new meaning to a secondary object. The meaning that is attached to the object - in this case to an image or a collage.

Firstly, the given element triggers the recipient's memories and experiences about the object itself. Secondly, they build associations with the theme of discussion in the process of re-capturing and re-constructing the primary meanings, and then, referring their stories to the subject of discussion. Finally, the students sense their experiences through their personal stories, and this may create a feeling of collective sharing and belongingness in the learning community (Lambert, 2013). In the moment of presenting (sharing the stories), the whole group is focused on the speaker who is in the center of attention and as the cameras are on, and this is how the online presence is demonstrated.

During vision-board workshops, we operate with images as objects that stimulate the creation of associations. In the next steps, these are transferred to express the story that is related to the topic of the workshop. The quality of the output of this exercise depends on the level of the introductory knowledge and experiences. If the discussion is on Sustainability in general, students probably have access to broad information about the topic, so the associations will be created faster. If we target a more precise term, for example Gender Equality, or name any other goal on the list of the UN's Sustainable Development Goals, the scope of knowledge and experience they can build on will be narrower, and not so universal as in the first case.

Importantly, interpretations are stronger when the lived experience is stronger, so crafting the questions at the right level while balancing between abstraction and precision is also needed. The practical implications are linked to the mindful design of the creative workshop, as the expected quality of content and abstraction of questions should be matched with the initial level of knowledge in the discussed topics.

The fluency in using metaphors ensures taking a further step and developing a story that is about covering the essence of metaphors inspired by images with a 'narrative' that is understandable to the audience. Drawing on this and adding the concept that our experience is simply what we do, which is an

inevitable assumption in Dewey's theory of experience (Dewey, 1938), into the picture, the quality of insights taken from the student's story is situational, depending on the perception of place (if students focus on their metaphors or they treat this workshop as a social collaboration space). Alternatively, they see it as a task that requires igniting a sense of collective intelligence. This impacts the climate of this experience, as most of the traditional didactic formulas encourage adding individual findings to the discussion, while here the tempo of activity demands instant building on the situation. Out of the mosaic of individual stories that are being "explored concurrently" (Farquhar & Fitzpatrick, 2019, p. 5), the new interpretations emerge.

Imagining: illustrative vs conceptualizing metaphors

Imagination is understood as "the ability to produce and simulate novel objects, sensations, and ideas in the mind without any immediate input of the senses" (Byrne, 2007, p. 38). The process of imagining aims at the formation of "images" in the mind that is shaped through the re-creation of experiences that are evoked in response to a given stimulus. When the vision board technique is applied, a facilitator names the trigger, for thinking about associations about a certain topic. According to media theorists (Perdue, 2003), imagination is about "thinking through images", as seen in the etymology of the word 'imagination', which comes from the Latin verb *imaginary* which means "to picture oneself". In the process of imagining, the necessary focus is on self-reflexivity, as each person needs to create an image in their head, then overthink the sense of this image (this dynamic stage is about fantasizing around the interpretation) and form the image that is ready to be expressed.

Thanks to the ability to imagine, we can integrate experience and the learning process, as words evoke experiences, and memories are used to form the associations which are then expressed through pictures and photos used on the online boards. As time pressure is embedded in the task, students need not only to boost their imagination in real time to create almost instant associations with the visual triggers, but also to react and make decisions quickly and 'think on their feet', as besides thinking about their metaphors, they also need to be oriented in what is going on in their group. The time pressure adds the feeling of not being able to control the environment and not being in the comfort zone as time pressure is high. There is no time to rethink the selection of photos, metaphors, and stories. There is one more lesson learned from this experience, and this is acceptance of the ambiguity and complexity of the situation.

Students are provided with a framework for creatively making sense of life experiences. If students have vivid memories of the topic of the conversation, they will extract the images from their knowledge (when the concept was acquired as theoretical) or experience (if students have experience in the topic). The level of their orientation in the topic will be seen in the precision

of the words they use and the precision seen in the style and tone in which they construct metaphors: the less familiar they are with the topic, the more abstract their metaphors are. The stories will be focused on the content of the picture or photo itself, instead of serving just as an illustration when presenting the point.

To summarize the role of visual inspiration in crafting the story around the findings in visual board imagining:

- Conceptualization – the pictures provide inspiration and trigger the way in which imagining takes place. The pictures are picked first as

something that may be useful, and only then do the story and the statement emerge and is the interpretation provided. Sometimes, the essence of the story appears unexpectedly as an attachment to the vision.

- Illustration – the pictures are instrumental illustrations of the statement or term. The photo is a visual representation of the story, just like a picture in the background of the presentation. The process of sharing starts with having a precise point to be illustrated. This is an example of using vision boards in a tool-oriented role.

Table 1
The difference between using an image as a conceptualizer or illustration

Process of imagining in general	Create	Fantasy	Form	Manifest
Imagining during the creation of online vision boards: Conceptualization (forming a concept)	Making associations in the mind	Trying to re-interpret them to match the picture/photo	Forming a conclusion	Presenting it, expressing it using the picture as something that delivers the core content; the metaphor itself is a story
Imagining during the creation of online vision boards: Illustration (illustrating the concept)	Finding an exact photo that expresses your point	Thinking about the story that combines your point with a picture	Making it even more precise to ensure that the point is visible	Presenting it, expressing it in a way in which a picture is just an illustration in the background

Source: author's own work.

Figure 2
An example of using visual metaphors as an illustration – Metaphors of Employee Engagement in SDG goals



Note. The picture was taken in December 2021 at a workshop for post-graduate students.

Source: author's own work.

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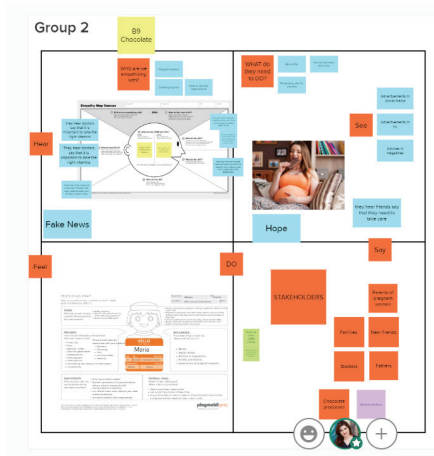
Figure 3
Using visual metaphors as a conceptualization



Note. The picture was taken during “Cross-cultural management” in November 2021.

Source: author’s own work.

Figure 4
Using visual metaphors as a conceptualization of a marketing persona



Note. The picture was taken during “Business Plan” classes in November 2021.

Source: author’s own work.

Meaning and interpretations: extracting meaning from a picture

Vision boards are interesting due to the element of presentation, as students are aware from the very beginning that the story attached to their visual metaphor will be presented to others. This requires the self-reflexivity process to be streamlined into a story that is understandable for the audience, so the abstract metaphoric associations should be translated into graspable pieces of the story.

Real-Time Imagining in the context of this article is about crafting new meanings, and can be sensed through the notion of letting our students experience “mental *bricolage*” (Rogers, 2012). The term *bricolage* was introduced by anthropologist Lévi-Strauss (1966). The essence of this term is linked to the activity when we combine various elements of to create new objects with totally different functionalities than those that were used separately. It usually refers to home repairs and DIY activities.

Farquhar and Fitzpatrick (2019) explained the concept in this way: “*Bricoleur* was originally a term used to describe craftspeople who work creatively with materials leftover from various other projects, and who use “the tools at hand” to create something new” (p. 7).

It has been proven that high emotional states such as excitement are computer-mediated in this case, however the students work in a way that is unexpected of them – they usually work with text, not pictures. Now they can (or they are even instructed to) move from the rational and linear ways of reasoning to the more symbolic and lateral way of interpreting things (de Bono, 2015). This requires a higher level of abstraction, generalization, and dynamic selectivity with a decision pivoting in interpreting pictures and photos.

The powerful role of images can be deduced from the extended definition of the process of visual communication taken from the Visual Communication book (Huck et al., 1997), which explains that even in the online environment, images bring the experience of non-linearity to the workshop. An image (printed or digital) is a subject of reconstruction “intended to produce a continuous representation of the discrete output of the image-gathering device (either with or without digital processing)” (Huck et al., 1997, p. 6), which means that the technological medium also impacts the meaning transmitted through this photo. The practical implications of this statement show the importance of choosing digital tools such as whiteboards. This adds additional positive dynamics to the process of Real-Time Imagining.

To summarize the concept of Real-Time Imagining, only humans have the ability to generalize concepts and formulate conclusions based on abstract assumptions to finally imagine new things (Groth & Nitzberg, 2018).

Findings: The key moments when working with the visual metaphors in the class

Exploration of insights: initial thoughts and streamlining the choices

The first practice was about the introduction of collage-based boards. Students were asked to choose pictures they associated with the topic and upload them to the whiteboard.

The students needed to combine their reflections and inspiration from various sources: around the course

- theoretical concepts introduced in the class,
- in-class readings and pre-readings, or e-learning,
- their experiences in the area or the projection of those experiences to create an environment of serendipity understood as “a possibility to appear”. The level of serendipity increases with each reflective piece of topic-related knowledge, in other words the more students knew before about the subject, the most probable it was that they would make an association and transfer their couplings to meaningful topics. The pool of terms, experiences, and reflections they could reach would be wider.

The second step was to make a decision on which elements from this melting pot of associations and visualizations will be presented in front of the classmates. At this moment, students became selective, as they were carefully attaching the meaning and stories to what was going to be presented in the plenum. They were choosing words carefully to be sure that this story was a demonstration of their knowledge of the topic.

We aimed to trigger a discussion about course-related terms reflexively and engagingly through the explorations of insights that emerged in the group discussion. It was the role of the facilitator to craft a question that can be general: “What is Sustainability?” or more precise “What are the standards of sustainability reporting?”. The questions were to be adapted to the types of thematic collages.

Additionally, the collective opinion was to be expressed, which also required negotiating the individual versus collective space and finding a mechanism not only to express the moods of each individual but also to craft a collective narrative around the story.

Introducing rounds – building on someone else’s knowledge

In both practices, the collage/vision boards or a stream of photos, it was highly recommended to design a creative class to enable at least two rounds of sharing in a group. This was an opportunity to activate social learning. Apart from the experience of Real-Time Imaging, there is an element of building on ideas of other people. This has been achieved thanks to:

- the experience of sharing the same space: working at the same time and working on the same task,
- the experience of group work as we build on other people’s stories,

- experience in contributing to the group work with their ideas and perspectives. Furthermore, there is transparency in the contribution, as software such as Miro or Mural has a function for tracking the contribution of each workshop participant.

Framing anonymity

When we talked about contribution, the frame for anonymity (whether we accept an anonymous contribution or we choose not to track the contribution path of each user) was vital, as this was an element of negotiating expected visibility and activeness in the online classroom. This is aligned with the methods aimed at boosting engagement (Chester & Gwynne, 1998). As it was urgent to transform the classes into a fully remote workspace, I lost a sense of control over the traditional (physical) environment at the university. As the university physical infrastructure could not be used, new ways of working: new culture, etiquette, norms, and rules for online meetings, had to be formulated. Apart from negotiating participation and visibility, we could also experiment playfully with the level of anonymity in participation.

- In computer-mediated anonymity, we needed to reset the rules, stating how anonymous you are when you join the meeting (for example by using your name or a nickname) or are active on the whiteboard and let the machine track your actions and then assign the activities to the student’s name.
- The recommendation during the presentation of their Vision Boards was to have the faces of all the team members visible with the camera on.

Presenting a collective interpretation

In business practices, we call this moment a *debrief*, in Language Studies, the term *demetaphoring* will be more suitable. In both cases, it suggests the moment at which from the engaging process of imagining the meanings we gain insights that are related directly to the topic of conversation (English, 1998).

Presentation is the most important thing when we treat vision boards as a way to conceptualize things. When we talk about illustration, we are floating at the surface of meanings, and even within tight time frames we can create a story of a descriptive character, as the picture is just a direct visual representation and does not need to be interpreted reflectively. Even a literal interpretation is sufficient.

Again, students asked to flow into real-time imagining can become too distant from the desired learning output. Through the facilitation and observation of the group dynamics, we should not let the findings stray from the target, which is to introduce new management-related terms reflexively and engagingly. Similarly, when we talked about ‘serious play’, we were not talking about the radically spontaneous, frivolous play for the sake of playing; we were talking

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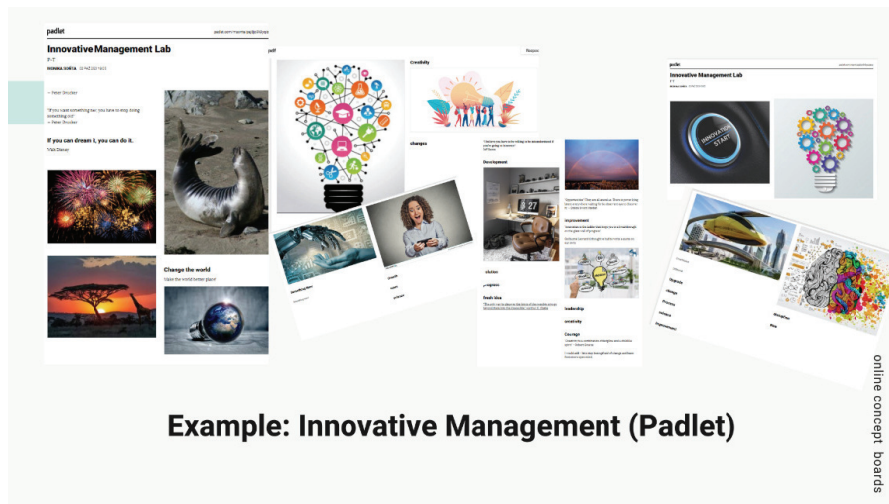
about a process that is oriented to share business stories and introduce more reflexive learning through the creative methods we use, as explorations of the topic go beyond the rational point of verbal or written manifestation of the findings.

When we talked about business education, the process of imagining should have been just one of the stages, and then the debrief session, while attributing the meaning of the story about the management term discussed, should have been completed. We as teachers had three main tools to design this experience:

- Time pressure (setting the time limitations, tracking the time, and reacting to the dynamics and needs of the students in the classroom regarding the time slot for the particular module).
- Accenting the importance of the final group presentation to retain the experience of collective work and contribution of each team member.
- Taking over the explanation of the term in the right discussion and facilitating the interventions that are needed to ensure that the insights and key findings are named and clearly communicated.

Figure 5

Online Concept Board titled: "What is Innovation?"



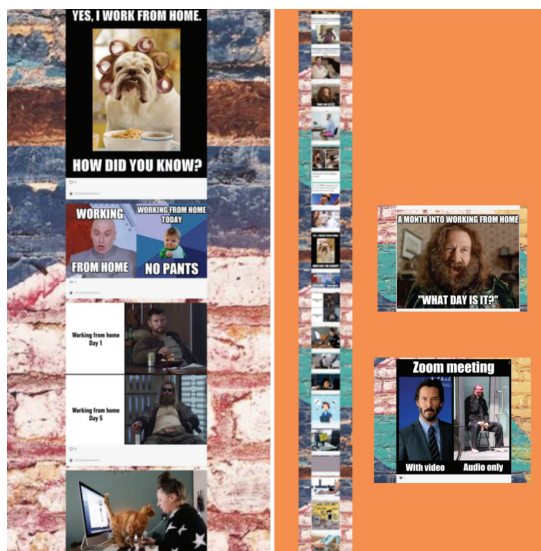
Example: Innovative Management (Padlet)

Note. The picture was taken in the Fall semester of 2020/21 during the Innovative Management course.

Source: author's work.

Figure 6

Online Creative Explorations illustrating "Working From Home culture".



Note. The picture was taken in the Fall semester of 2020/21 during the Introduction to Innovation Management course.

Source: author's own work.

According to Jung (1963, p. 3) "everything in the unconscious seeks outward manifestation". Also in this case, when we trigger the process of imagining and we disrupt the calmness of linear processes with a dynamic time-pressured lateral thinking triggering event, we need to take responsibility for concluding the process in the right way. As the moment of manifestation of ideas, the presentation is crucial to hear out loud the findings and "hear outside what was said

inside". The inner group discussion must be brief enough to have the experience of not having enough time to complete the process of thinking (Xavier & Lhullier, 2020).

The feeling that accompanied the group when they started presenting is that they were 'unprepared'. This opens the way for improvising, so the final presentations may be only part of what they agreed on as a group in the discussion. The overwhelming feeling of incomplete discussion was needed to understand that it was just the beginning of the conversation about the topic, and sense that this discussion was not final.

Moreover, the facilitator(s) are accountable for taking over the process of explaining the term with greater precision from the very first moment they see the opportunity to build on the student's findings from the vision boards. For example, the students elaborated on the criteria of diversity, and our role was to recognize their effort and offer complimentary sources to read about the topic. To give another example, if we noticed that some topics were popular in the group, we could include them in the course. In this way, vision boards can be also treated as expectation mapping, as the topic of interest is provided by the students themselves.

Once all of the groups have presented their materials, our role is to transfer the metaphorical associations into the structured findings and find interconnected topics, more precisely name connectors. The role of the facilitator was to find a common space and encapsulate the topics that were interesting to the students. The discussion had gone in multiple directions and our task was to extend the meaning of this experience beyond one session. We could refer to the statements that were presented in the collages to ensure a sense of well-designed structure.

Moreover, the acceptance of flexibility in the interpretations and general openness to telling the stories more as a framework than an instruction-driven (fixed) way supported the process of learning among students whose style of learning is more kinaesthetic and auditory than visual. One of the facilitator's responsibilities was to empathize with the students whose preferred form of experience was not visuals-driven.

The other experience related to the application of the flexible framework of this method was that work is never final and accepting incomplete outputs. The iterative nature and continuous references to the interpretations that had been created by students is a crucial benefit of this technique, as it opens the door to a narrative over the whole course.

Engines of engagement in the collage-based techniques: co-creation and collaboration

The two main engines of engagement for students are connection through collaboration and the experience of creation.

Experience of creation: we = the creators

If no interpretation was provided, the collages were just a set of meaningless pictures combined randomly. This was a group that explained its vision to the audience. They created it from scratch, and shaped the meaning behind such a construct. Creativity for the sake of creation is powerful itself, and combining it with collective actions and poking the comfort zone with time pressure bring it to a different level of experience. This experience is based on the collective intelligence of a collaborative characteristic (Gloor, 2006).

Connection through collaboration – social learning

Apart from Bandura's concept of social learning, Resnick's (2017) Lifelong Kindergarten approach can be useful. According to this concept, to ignite an engaging learning spiral, four elements (4Ps) are necessary:

- Peers

A good experience depends on the activation of peer-to-peer social learning. This is generated when workshop participants contribute to the common solution and work together in a way in which they can share their ideas, receive

feedback, and build on the experiences of other people. In this way, they reflect on their initial ideas.

When enabling social sharing space with the whiteboard, the students were invited to collaborate and communicate with each other.

- Project

The task should be clearly defined with the expected outcomes transparently communicated. Moreover, the presentation was an unavoidable element that frames the discussion into the visible point of ending this exercise and continuation with more traditional ways of teaching. After the creative part, the phase of debriefing and time for reflection was given by offering less creative and more literal explanations of the discussed concepts.

- Passion

This situation was framed as part of formal classes, so the energy at the start of the project should have modulated the actions. For some people, the feeling of creating something or working in a different way than usual was enough to evoke high emotions in comparison to the engagement used in the standard, less active forms of the introduction of theoretical concepts.

- Play

Working with visuals offered a playful experience as the students were flexible with the image choices and then they were improvising with their stories. The visuals were the opener of the conversation, and being able to associate the verbal story with a photo or a picture generated a highly playful discussion, especially with amusing associations with the pictures. This was also a moment of experimenting and "playing" with interpretations that were going to be selected to be presented in the end.

Working with visual metaphors fulfilled all the requirements of the definition of engaging experience.

Practical implications for business education

When future opportunities to apply image-based *bricolage* techniques are considered, three concepts should be mentioned:

- creativity as a competence of the future,
- learning reinforcement,
- teaching in a hybrid environment.

Creative thinking as a competence of the future

First of all, when we scan through the list of most desired competencies in 2012 created by the World Economic Forum (<https://www.weforum.org/focus/skills-for-your-future>), it is clearly stated that the ability to create, communicate and critically interpret is highly valued. What is more, this is what distinguishes us from machine thinking and learning.

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Secondly, in remote classrooms, it is challenging to create a common space where everyone is involved. By dividing students into groups, we as teachers facilitate participation and frame contribution, setting the rules of presence and being active. Usually, this is one of a few moments in the online session when social competencies are put into action. Moreover, do students have a sense of belonging to the student group? We facilitate social discussions and design moments of presence and visibility when the collages are presented. That empowers us, as educators, to perform the role of facilitation. In remote study, we are the ones who enable and design the creative workspace and then set the rules of participation and set expectations with regard to visibility (Sale, 2020). This is because this is the starting point to gain trust to launch the creative contribution that is in line with the concept of self-directed learning.

Learning reinforcement

The main driver of engagement is about designing a memorable experience during the workshop itself, and also to complete the cycle of learning we need to keep recalling this experience, and build on it in the rest of our course through constant visible references to the creative workshops and students' findings around the given topic.

Make the collage 'real'

Virtual activities may not replace the real experience. Fortunately, visual *bricolage* is engaging in both realities. As creative activities that involve our hands boost kinaesthetic learning through practicing muscle memory (Lam, 2020), it is recommended to use all the opportunities to embed a tangible dimension of hands-on methods even in the online workshop. The students can be asked to prepare a collage in their own homes, and then present the results before the camera or upload a photo of the collage to the chat.

In this application, the vital role of students' description of the key insights is important, as the collages are not self-explanatory. Secondly, the students should be encouraged to use keywords and write down the key terms directly on their collage.

Final word – level up the understanding

At a level of creative content: Thanks to incorporating visual *bricolage*, letting our students construct metaphors, and offering them contextual permission to Real-Time Imagining, we introduce a realistic vision of the business world that is uncontrollable, ambiguous, and unpredictable. Similarly, in Paul Ricoeur's findings (1991) – a successful metaphor shatters and increases our sense of reality. The experience of tolerance of ambiguity creates a space for more open expression of thoughts.

At a level of collaborative context: Each mechanism of engagement during the workshop helps to sense the real climate of management in turbulent times through Real-Time Storytelling. Furthermore, draw-

ing on John Steiner's concept, the process of crafting realities needs to be combined with "the dynamics of emotional and intellectual connectedness and partnerships with other team members" (2000, p. 184).

At all levels, it is about the co-creation of meanings to take an understanding of the reality around us to a higher level: "When we engage in the narrative, we are not portraying a pre-existing world as it is; we are interpreting phenomena to create that world" (Farquhar & Fitzpatrick, 2019, p. 6).

Finally, one of the most engaging ways is to express this reality in a non-self-explanatory visual way to unleash curiosity about the meaningful interpretation. The explanation can be delivered only through narrative stories told in direct human-to-human interactions, so much needed in the digital learning experience.

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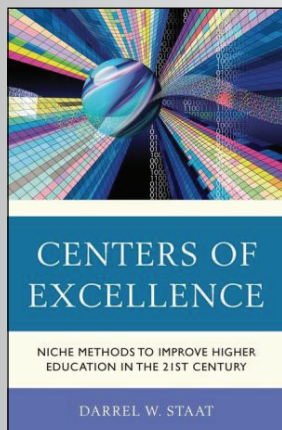
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Darrel W. Staat (Editor)

Centers of Excellence: Niche Methods to Improve Higher Education in the 21st Century

There are many Centers of Excellence (COE) in community colleges and universities in the United States. Presently, a number of these provide approximately an extra year beyond various existing degrees. Most of these COEs deal with a variety of training and educational needs and work directly with the appropriate business communities. They provide students with additional training and expertise beyond the normal degree programs. This gives graduates specific educational training on the latest developments in their area of expertise, which makes them more employable and sought out for by businesses. Centers of Excellence: Niche Methods to Improve Higher Education in the 21st Century informs institutions of higher education about COEs that currently exist so interested administrators may initiate Centers of Excellence that are needed in their service areas. Furthermore, the information in this book will assist community colleges and universities in learning how a Center is activated, funded, and supported.

The Centers are valuable to students, higher education institutions, and the business community.

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