



Infographics and Knowledge Translation

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Outline



About Infographics

A brief introduction & history

Infographics for Knowledge Translation

How they are used for KT

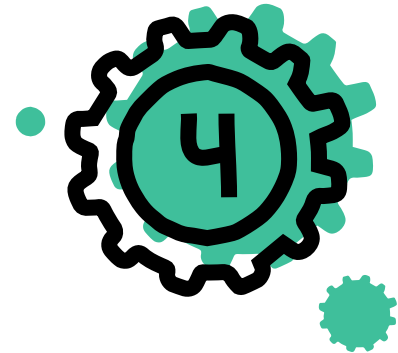


Impact and Useability of Infographics

A proposed study

Resources

Links to useful references and guides





Part I

A brief introduction and history

What's an infographic?

The image shows a YouTube video player interface. At the top, there is a search bar and the YouTube logo. The video content features a central graphic with the text "WHAT'S AN INFOGRAPHIC?" in white on a blue background, surrounded by various infographic icons like bar charts, pie charts, and lists. Below the video, the title "What is an Infographic + Downloadable Templates" is displayed, along with the channel name "Easelly: Infographic Design Tips & Tutorials" and a red "SUBSCRIBE" button. The video has 27,282 views and was posted on Sep 6, 2020.

YouTube CA Search

WHAT'S AN INFOGRAPHIC?

#infographics #infographictemplates #graphicdesign

What is an Infographic + Downloadable Templates

27,282 views · Sep 6, 2020

266 22 SHARE SAVE ...

Easelly: Infographic Design Tips & Tutorials

SUBSCRIBE

<https://www.youtube.com/watch?v=Yvo-mHq1ojU>

History of infographics

Chauvet-Pont d'Arc Cave in France

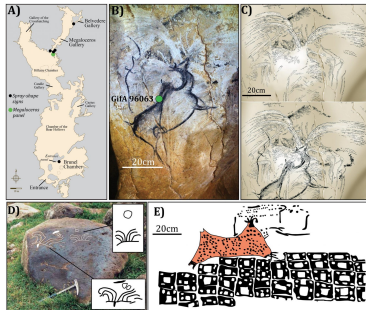
Spray-shaped images found at the Chauvet-Pont d'Arc Cave in France were thought to depict the nearby volcanoes that erupted and expelled lava into the sky.

1764: Joseph Priestly's "Chart of Biography"

Illustrated the lives of ~2,000 historical figures on a timeline.

Two decades later...

37,000 BC

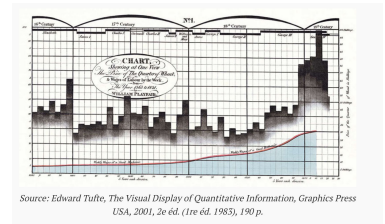


Serra Da Capivara in Brazil

Rock art specialists propose that the rock art of Serra Da Capivara in Brazil, dating as far back as 36,000 years ago, are the origins of infographics.

18th
Century

Playfair; Minard; Beck



History of infographics continued...

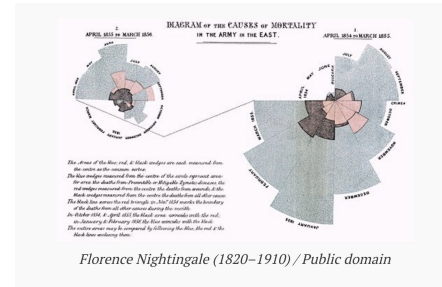
The Birth of Data-Based Social Science

1830's

André-Michel Guerry

Illustrated maps showing moral statistics with Venetian geographer, Adriano Balbi.

Florence Nightingale



1857

Minard

Creates the map of Napoleon Bonaparte's 1812 Russian campaign

1859

History of infographics continued...

Harry Beck

Made the first map of the London Tube

*A milestone in infographic history as it proved that visual diagrams could be used for daily life.

1933

1972

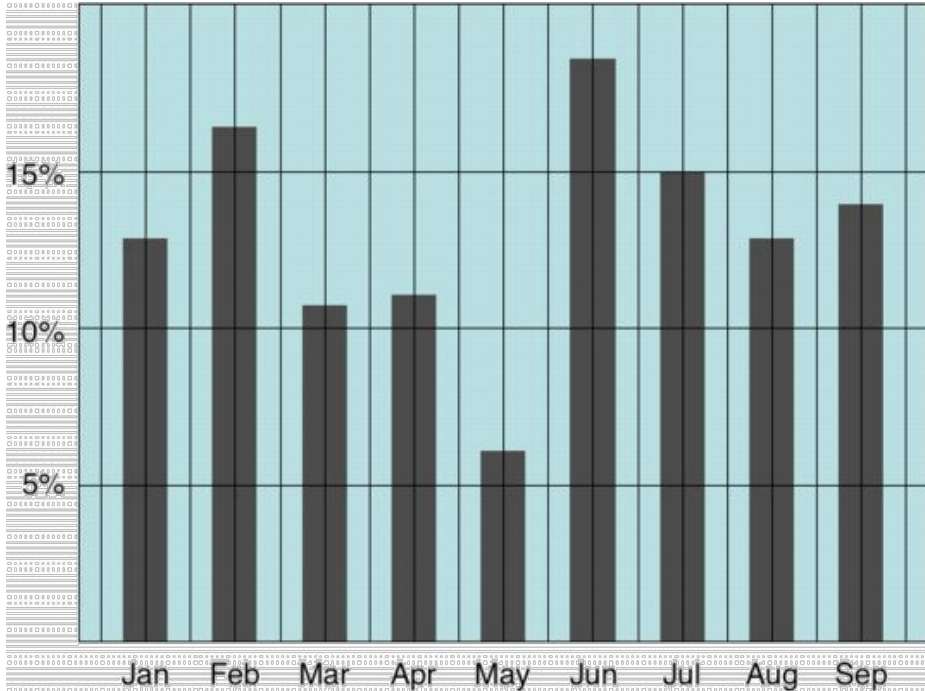
Otl Aicher



Pictograms adopted to those of the Olympic Games 1972 in Munich, Germany symbolizing Curling, Figure Skating and Ice Hockey. Drawn by Otl Aicher, on Display at the Olympic Ice Rink

Tufte VS Holmes

1975... +



The ultralight equation

SCIENTIFIC PROOF THAT TRIMMING OUNCES GIVES YOU LONGER DAYS AND STRONGER LEGS

GRAPHIC BY NIGEL HOLMES, RESEARCHED BY GINA DEMILLO

1 HIKE FARTHER
For every 5 pounds you take off your back, you burn 4% fewer calories in an 8-hour hiking day. That means for an average backpacker burning 500–700 calories an hour...

...if you take 5 pounds out of your pack (trade your tent for a tarp), you can hike about 20 minutes longer without running out of steam.

...lose 10 pounds and you'll hike 40 minutes to an hour longer.

...lose 25 pounds and you can extend your hiking day by 2 hours or more. Also, with 25 pounds less on your back you'll need about 5% less food per day.* On a 5-day trip, you'll lighten your food and fuel weight by 2 pounds.

2 SEE MORE
With more hours to hike, you'll see more wilderness than ever before and still have energy left over.

A 180-pound person carrying a 25-pound pack uses about 20% less energy than a 180-pound person carrying a 45-pound pack. The result? The person with the 25-pound pack will have extra energy at the end of the day to cook a gourmet dinner, climb a ridge to see the sunrise, and watch for wildlife.

3 FEEL ENERGETIC
Eat a few handfuls of gorp (raisins, M&Ms and peanuts) and then hike.

With a 45-pound load, this snack will give you energy for about an hour's hike...

...but with a 25-pound load, the same snack will give you enough energy to hike more than 3 hours.

4 SAVE YOUR KNEES
Studies show that backpacking for 8 hours on uneven terrain can put more than 250 tons of pressure on your knees. Lighten your pack by 10 pounds or more, and you can reduce that strain by half.

5 FEEL YOUR FEET
Heard the saying that a pound on your feet equals 5 on your back? Not true. Turns out taking 1 pound off your feet yields the same energy savings as taking 6.4 pounds off your back, according to ergonomics studies.

5 pounds less in your pack equals 20 minutes more hiking.

10 pounds less in your pack equals an extra hour hiking.

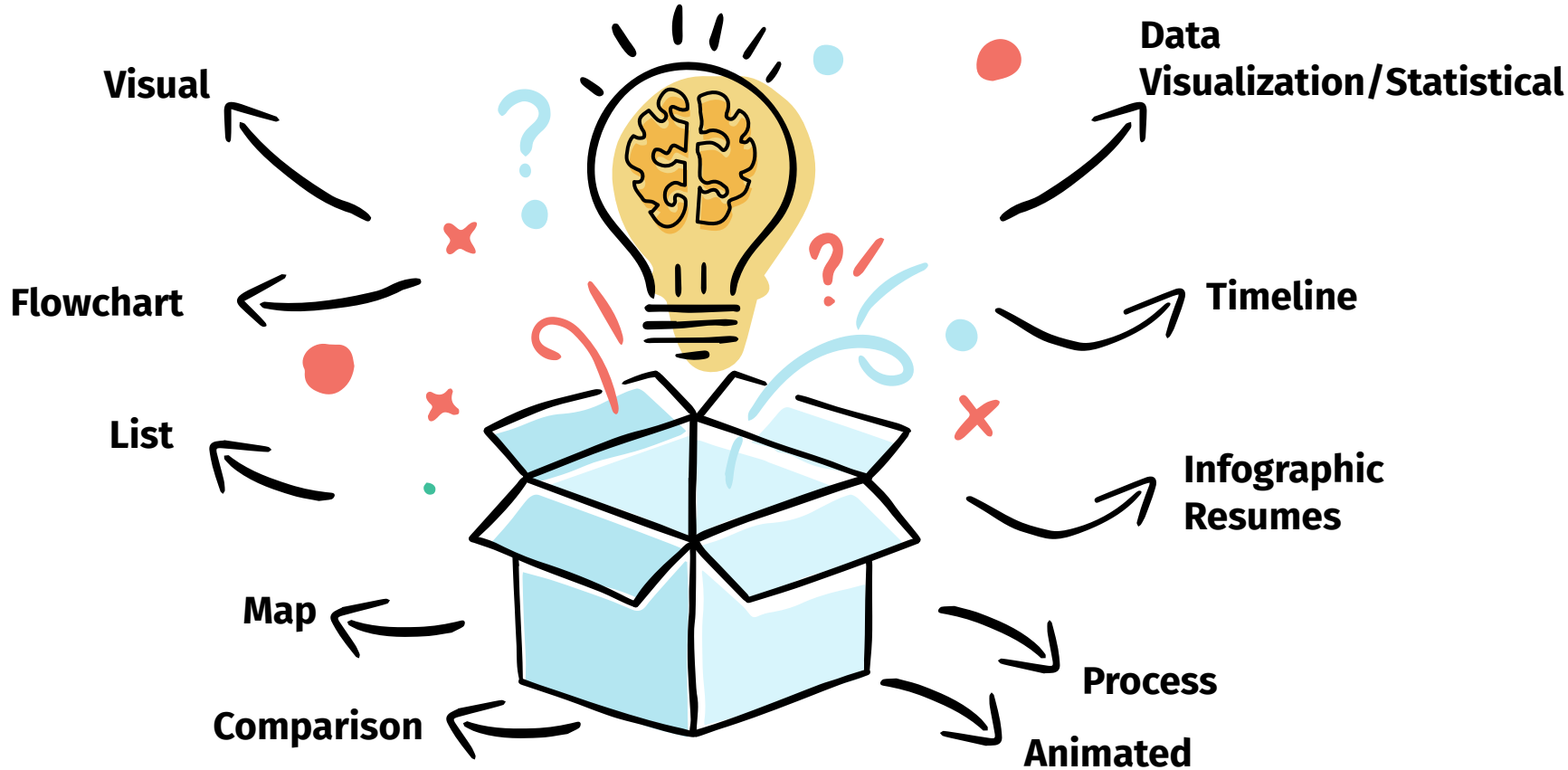
25 pounds less in your pack equals an extra 2 hours hiking.

1 pound less on your feet equals 6.4 pounds off your back.

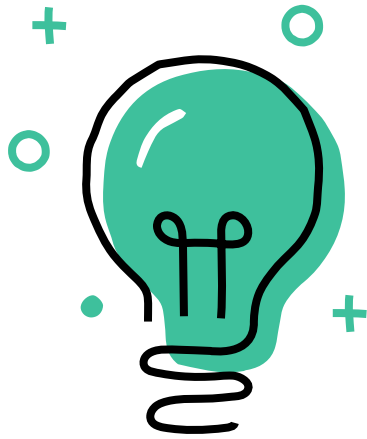
* Based on a 1,000-calorie/day diet, and the estimate that 1 oz food = 104 calories.

Types of infographics

https://www.youtube.com/watch?v=cK0pfcsfGj0&feature=emb_rel_pause



What makes an effective infographic?



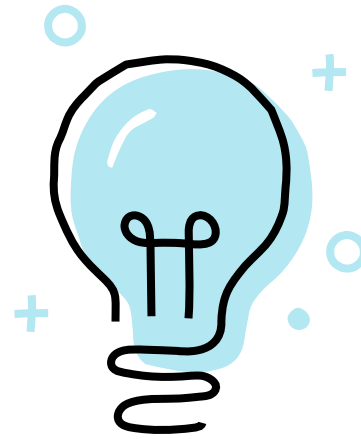
Informational honesty

Adding visuals to texts has been shown to improve learning and memory recall.



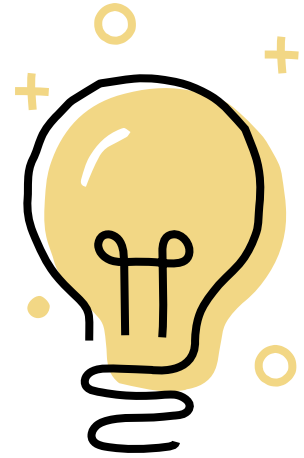
Complexity of content

Easy to read fonts, Limited colour palette, simple illustrations



Consideration of illustrations

Choose simple illustrations



What does it need?

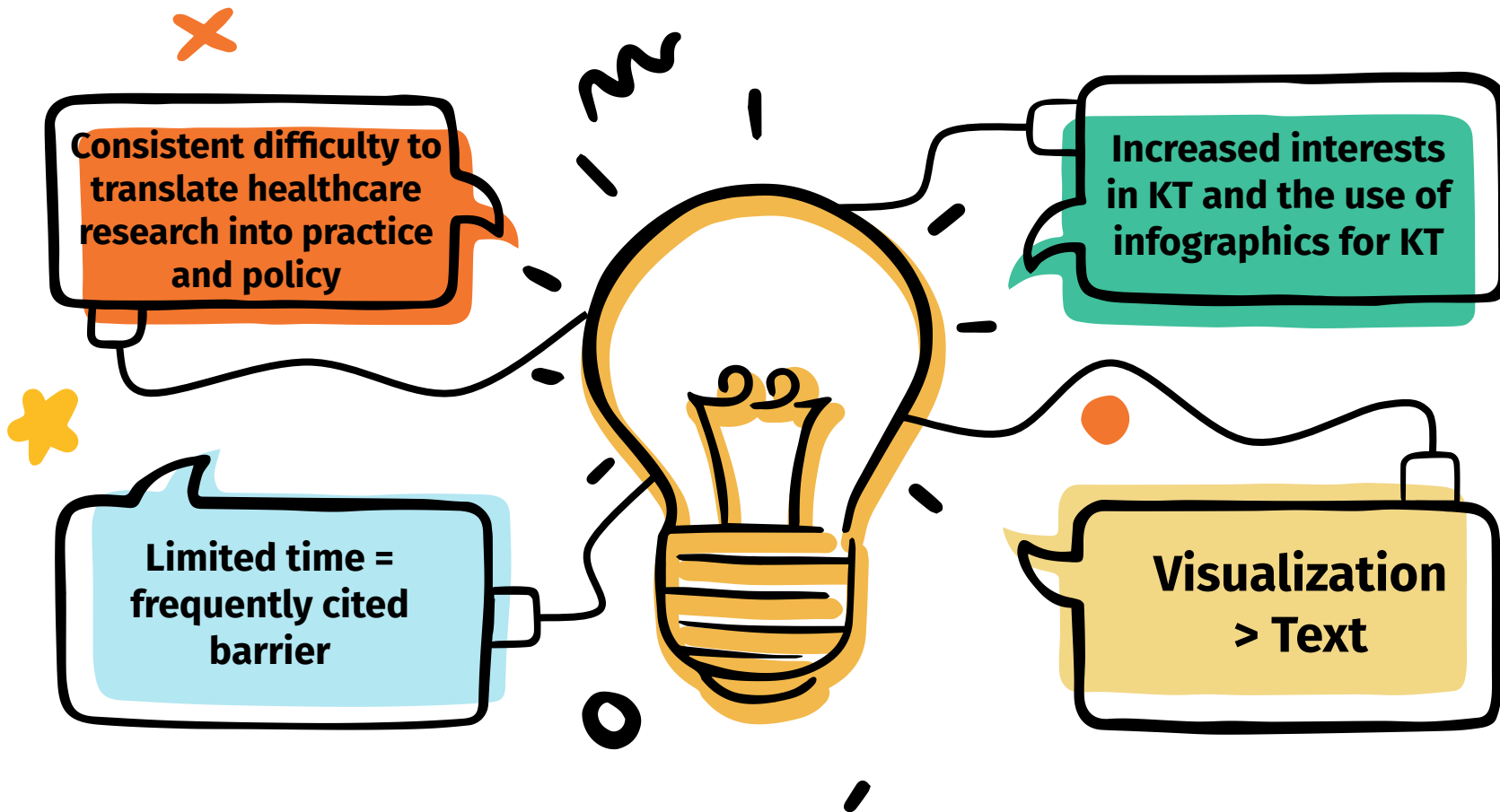
Will interactive elements be helpful or distracting?



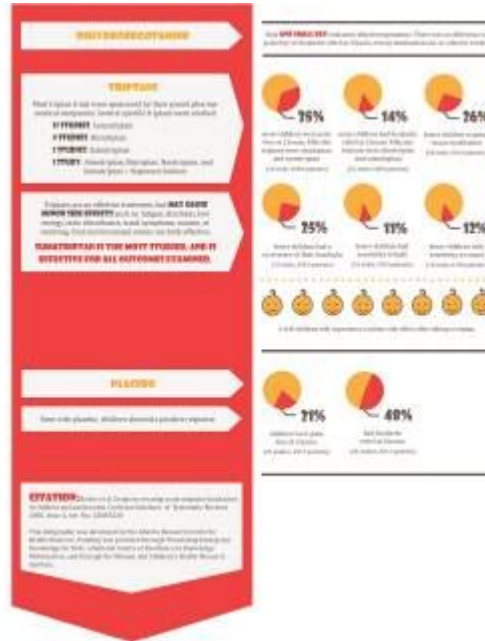
Part II

Infographics for knowledge translation

Infographics for knowledge translation (KT)

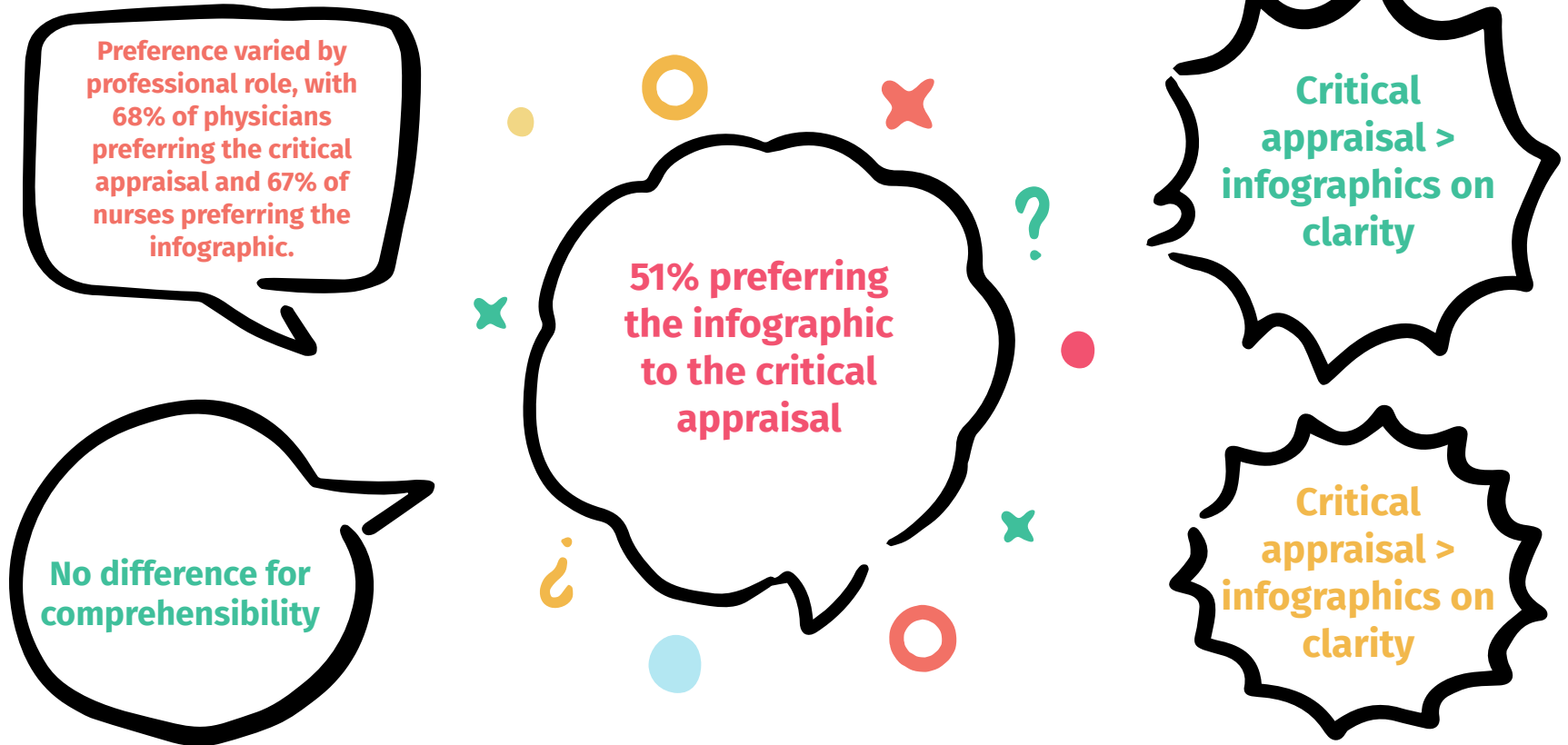


Infographics VS Critical Appraisals



Critically Appraised Topic (CAT): What drugs are effective and tolerable for treating acute migraine headaches in children and adolescents?	
Title	Drugs for treating acute migraine headaches in children and adolescents
Reviewed by	Tariq Alshawaibakh, MD
Date of review	August 2013
Question	In children and adolescents under the age of 17 with acute migraine headaches, what drugs are effective and tolerable for treating acute migraine headaches in children and adolescents?
Clinical bottom line	The primary use of ibuprofen is justified based on safety and efficacy, with triptans as a suitable choice for those in whom ibuprofen has failed. Supporting information: These results are based on a meta-analysis of 25 randomized controlled clinical trials. Ibuprofen is a safe and effective treatment for acute migraine in children and adolescents. Acetaminophen is often used to treat acute migraine in adults, but there is insufficient evidence in one pediatric study. There is no significant difference in efficacy between acetaminophen and ibuprofen based on one small study. Triptans as a class are also effective in the treatment of acute migraine in children and adolescents (with higher response mainly in children <12 years of age), irrespective of the route of delivery (i.e. oral or intranasal). The rate of adverse events is higher with triptans although all are considered minor (e.g. fatigue, dizziness, low energy, taste disturbances, nasal symptoms, nausea or vomiting). The choice of triptan medication may be guided by patient preference, route of delivery, palatability, and familial experience. Sumatriptan may be a reasonable first choice but is not approved for use in pediatrics in some jurisdictions. Other choices are amitriptyline or rizatriptan or intranasal sumatriptan and zolmitriptan.
Search strategy	Nine electronic databases were systematically searched from inception to April 29, 2013. OvidSP MEDLINE, Ovid MEDLINE in Process & Other Non-indexed Citations, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, Database of Reviews and Abstracts, EMBASE, International Pharmaceutical Abstracts, PsycINFO, and EBSCOhost CINHAL.
Citation	Richer et al. Drugs for treating acute migraine headaches in children and adolescents. Cochrane Database of Systematic Reviews 2008, Issue 2. Art. No.: CD006020.
Critical appraisal	Population Children and adolescents under the age of 17 with acute migraine headaches. Interventions Acetaminophen or ibuprofen vs. placebo (2 studies, cross-over and parallel), dihydroergotamine vs. placebo (1 small cross-over study) and triptans vs. placebo (22 studies, cross-over and parallel). Outcome Pain-free at 2 hours, headache relief at 2 hours, and adverse events Design Systematic review of randomized clinical controlled trials
The evidence	The systematic review controlled for publication and selection bias to identify all relevant studies for the review. In addition, the a priori protocol and the methods of relevance, inclusion, and quality assessment were independent and valid. Finally, data extraction was verified and the data were pooled appropriately. Ibuprofen was superior to placebo for both the pain-free outcome (RR 1.98, 95% CI 1.30 to 2.95, I ² =0%) and headache relief (RR 1.54, 95% CI 1.18 to 2.01, I ² =0%) at 2 hours. Triptans as a class were superior to placebo for both the pain-free outcome (RR 1.35, 95% CI 1.20 to 1.51, I ² =36%) and headache relief (RR 1.14, 95% CI 1.05 to 1.25, I ² =66%) at 2 hours. Sumatriptan is the reference drug in the triptan class and most frequently studied. The other individual triptan medications were not significantly superior or inferior to sumatriptan. Minor adverse events were reported more commonly with triptans compared with placebo. The pooled analysis of placebo response rates was 21% (95% CI 18 - 25%) for the pain-free outcome and 48% (95% CI 44% - 53%) for headache relief.
RR, Relative Risk; MD, Mean Difference; P, I-square; CI, confidence interval.	

Preferences of knowledge users for two formats of summarizing results from systematic reviews



Knowledge translation of research findings

1. What should be transferred?



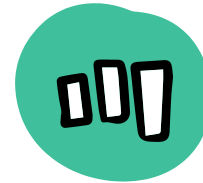
2. To whom should research knowledge be transferred?



3. By whom should research knowledge be transferred?

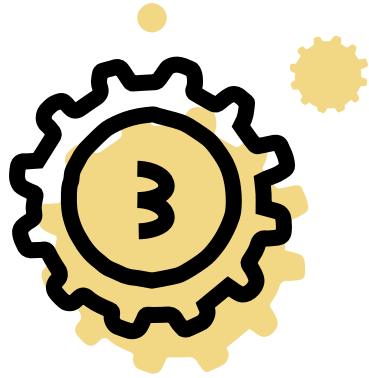


4. How should research knowledge be transferred?



5. With what effect should research knowledge be transferred?

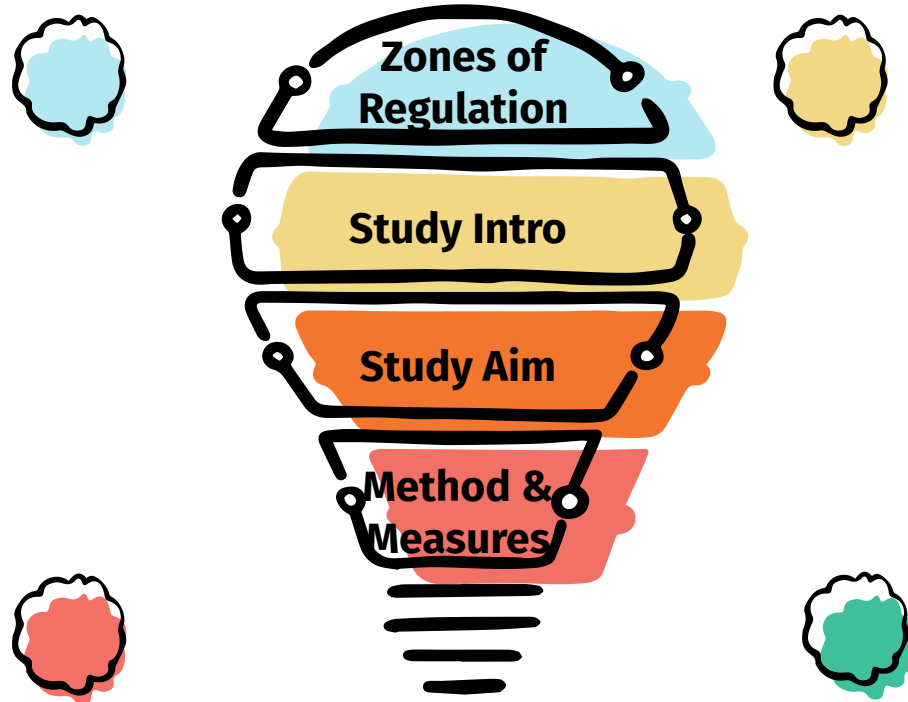




Part III

Impact and useability of infographics

Impact and usability of infographics amongst teachers introduced to the *Zones of Regulation* program



The **ZONES** of Regulation[®]

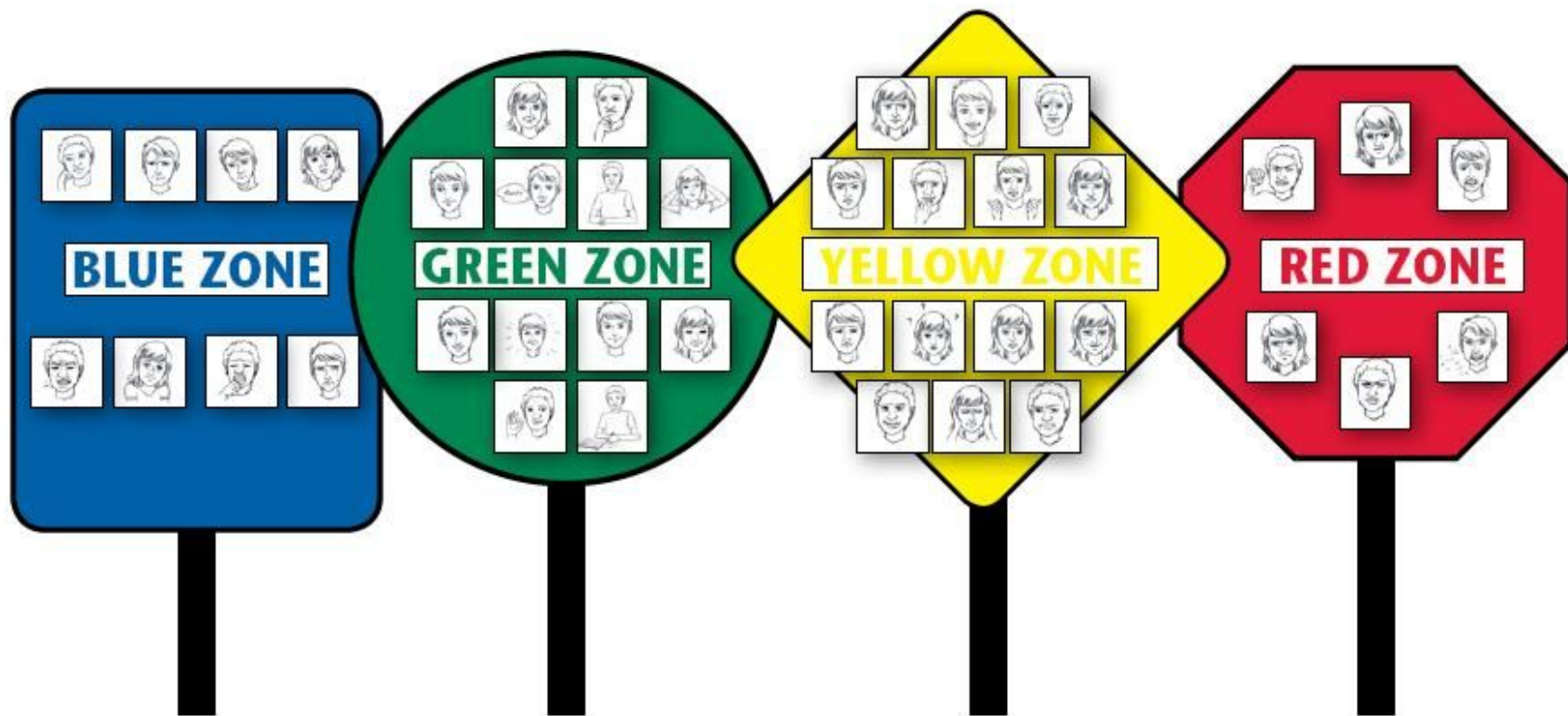
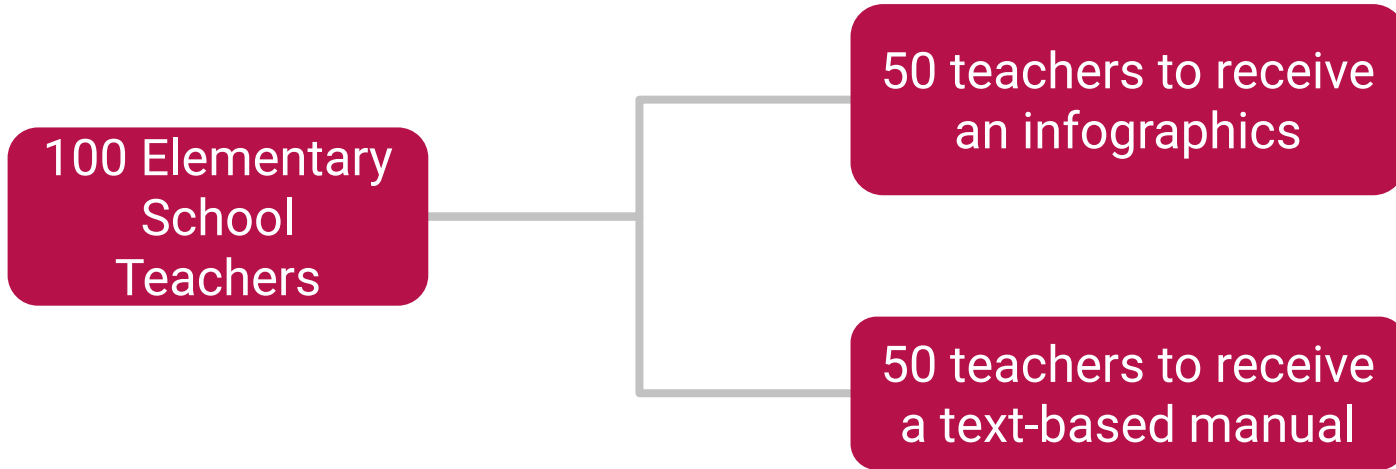


Figure 2: Wall Posters of the Zones

Introduction & Study Aim

- Aim: to examine the impact and usability of infographics relative to text-based educational materials in promoting teachers' knowledge and confidence in the *Zones of Regulation* program.



Method & Measures



Impact

Useability

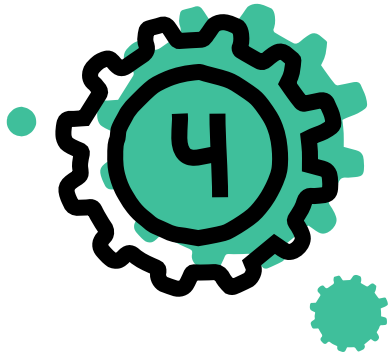
Impact & Useability

Survey: Is comprehension of the program aided by the infographic/text-based educational materials & confidence in using the program in the classroom.

Qualitative interviews: How easy the information is to understand, time it took to understand the material, content and format of the materials

NVivo thematic analysis

ANOVA



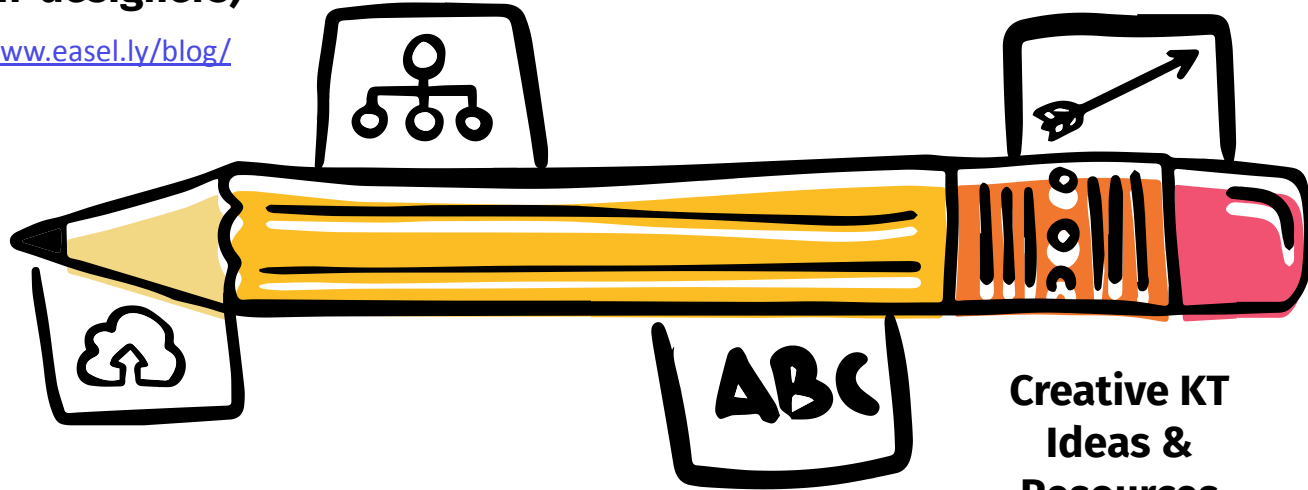
Part IV

Resources

Helpful links and resources

Making infographics (for non-designers)

<https://www.easel.ly/blog/>



Creative KT Ideas & Resources

<https://ktpathways.ca/system/files/resources/2019-02/if-res-mhr-creative-kt.pdf>

References

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Thank you!