Preparing for Poster Presentations

Dr. Thoron

Posters

- The purpose of the poster is the following:
  - Should provide enough information to a person that if the poster was there by itself the reader could know:
    - Why this study was investigated (Introduction & need for the study)
    - How it was conducted
    - Results
    - Conclusions
  - But that it would be helpful to have a person there to walk them through the poster – not 100% stand alone, but that the reader could grasp it on their own
  - I also rarely use periods and complete sentences in the creation of a poster – again, the poster should be a presentation tool.

Things to consider: APA

- There are ***<u>NO</u>*** APA Guidelines for posters
  - There is no right way nor a wrong way to do a poster
  - Some look better then others – it's a visual appeal
  - Organization and flow is key – the poster needs to be a useful tool for the presenter
- In the below examples (I made them smaller to fit on the slides and so the file size is smaller – so don't use that as a guide on font size – more on that later) notice how citations are used. Typically the author and year follows APA and I typically choose to make it a smaller font size.
- I typically DO list references on the poster, but in a smaller text.

Setting up a PowerPoint Slide for a Poster

- Size – If using PowerPoint – do the following:
  - Select Design Tab
  - Select "Slide Size"
  - Select "Customize Slide Size"
  - Enter width and height
  - Double check the slide is set to "landscape"

Things to consider: Font

- Font –
  - Best to use Arial or Times New Roman
    - If Choosing a different font –
    - Be certain it is easy to read
    - Don’t choose a font just b/c it’s different – too different makes it difficult to read

Things to consider: Font size

- Font Size –
  - The goal is to allow the reader the ability to read from 2-3 feet away
  - I typically try and follow this:
    - Title (at the top): 80-86 font size
    - Headings (for sections): 36
    - Words in the sections: 28 – 32
  - The key is to not have lots of empty places, so font size can change depending on how many words etc.

Things to consider: Text & Pictures

- Text – the number one pitfall – too much text!
  - Remember – a poster is not a stand alone item!
  - The poster and the presenter should be able to interact
    - It's much easier to include CLEAR data tables or charts for the presenter to use as a tool
    - Remember too much text – the judges don't read or hardly have time to read the poster – it must be useful and can be pointed out as the student presents.
  - This is the BIGGEST mistake I see – TOO MUCH TEXT (like this slide!)

- Pictures – be certain they are high quality and high resolution images
  - Remember to "blow up" the PowerPoint slide to 100% to look at the poster before printing to be certain:
    - Pictures and graphics are of good enough quality
    - That there is not too much empty space
    - That headings and pictures are not too close to each other

Things to consider – in general

- Logos
  - I see some use school logos or university logos
  - If they received help or collaborated – that's fine
  - Make sure images (logos) are high quality
  - No one gives extra points for seeing UF as a partner, but some add this etc b/c they had collaboration – this is fine

The Impact of Vee Map and Standard Laboratory Report on Content Knowledge Achievement

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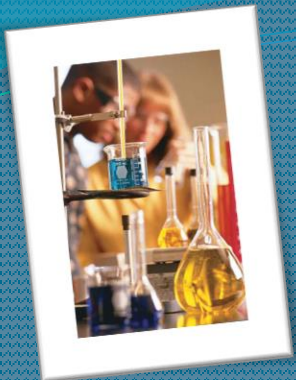
Brian E. Myers – University of Florida

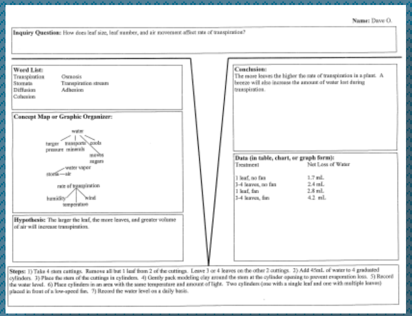


Introduction

- Understand scientific laboratory work
- Construct knowledge during laboratory experiences (Roehrig, Luft, & Ewards, 2001)
- Facilitates scientific reasoning (NAS, 1996)
- Scientific inquiry as the mode of instruction
- Problems with laboratories in high school are due to the overwhelming complexity of procedural assessments which lead to little learning (NRC, 2006)

Objectives

1. Compare traditional laboratory reports to Vee Map reports as formative assessment
2. Determine the impact on student content knowledge achievement



Name: Dave O.

Inquiry Question: How does leaf size, leaf number, and air movement affect rate of transpiration?

Word List:
Transpiration, Osmosis, Stomata, Transpiration stream, Diffusion, Adhesion, Cohesion

Concept Map or Graphic Organizer:

Hypothesis: The larger the leaf, the more leaves, and greater volume of air will increase transpiration.

Conclusion: The more leaves the higher the rate of transpiration in a plant. A breeze will also increase the amount of water lost during transpiration.

Data (in table, chart, or graph form):

Treatment	Net Loss of Water
1 leaf, no fan	1.7 mL
3-4 leaves, no fan	2.4 mL
1 leaf, fan	2.8 mL
3-4 leaves, fan	4.2 mL

Steps: 1) Take 4 stem cuttings. Remove all but 1 leaf from 2 of the cuttings. Leave 3 or 4 leaves on the other 2 cuttings. 2) Add 45mL of water to 4 graduated cylinders. 3) Place the stem of the cuttings in cylinders. 4) Gently pack modeling clay around the stem at the cylinder opening to prevent evaporation loss. 5) Record the water level. 6) Place cylinders in an area with the same temperature and amount of light. Two cylinders (one with a single leaf and one with multiple leaves) placed in front of a low-speed fan. 7) Record the water level on a daily basis.

Methodology

- Quasi-experimental design
- 3 sections of introductory agriscience selected randomly for treatment (n = 18) and control (n = 44)
- Pretest to establish a baseline and serve as a covariate measure

Findings

- Using the covariate of content knowledge pretest score, the effect of treatment was found to not be statistically significant.

	Group					
	Control		Treatment		Total	
Instrument	*M*	*SD*	*M*	*SD*	*M*	*SD*
Content Knowledge Pretest	32.68	13.59	33.33	15.88	32.87	14.16
Content Knowledge Posttest	39.70	19.30	44.17	19.20	41.00	19.22

- Anecdotal data suggest control sections were less engaged
- Teacher reported
  - Ease of grading
  - Less time spent grading Vee Map

Recommendations

- Future research in inquiry based instruction connecting scientific reasoning to higher achievement
- Studies investigating effective methods of science integration
- Replication of study to examine effects

References

American Association for the Advancement of Science. (1990). *Science for All Americans.* New York: Oxford University Press.
Campbell, D. T., & Stanley, J. C. (1963). *Experimental and Quasi-Experimental Designs for Research.* Boston: Houghton Mifflin.
National Academy of Science. (1996). *National science education standards.* Washington, DC: National Academy Press.
National Research Council. (2006). *America's lab report: Investigations in high school science.* Washington, DC: National Academies Press.
Roehrig, G., Luft, A. J., & Edwards, M. (2001). An Alternative to the Traditional Laboratory Report. *The Science Teacher, 68* (1), 28-31.

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Perceptions of The National Agriscience Teacher Ambassador Academy Toward Integrating Science into School-Based Agricultural Education Curriculum

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Andrew C. Thoron – University of Florida
Gregory E. Thompson – Oregon State University

Introduction

- Integration depends largely on the local teacher
- Students take control of their learning, make decisions, and solve problems (Dunbar, 2002)
- Studies report agricultural teachers willingness to integrate science (Thompson & Schumacher, 1998)
- Integrating science with the inquiry based teaching techniques is an important way to gauge integration

Objectives

1. Perceptions toward the integration of science.
2. Perceptions regarding barriers to integrating science.
3. Perceptions concerning the impact of science integration on student enrollment.
4. Perceptions of support from various groups toward integration.
5. Perceived competence / preparation level to integrate science into curriculum.
6. Describe the use of inquiry based teaching techniques.

Methodology

- Census study (N = 25)
- Descriptive survey research design
- Attitudinal instrument (Thompson & Schumacher, 1998) Cronbach Alpha .88 / Post-hoc .80
- Inquiry based teaching techniques instrument (Dunbar, 2002) Cronbach Alpha .90 / Post-hoc .81

Recommendations

- Use NAATA as a model to enhance integration in the curriculum.
- Focus on the impact of integrating science has on the number and ability level of students.
- Teacher preparation programs should review the amount of science offerings at the undergraduate level.
- Further studies utilizing Dunbar's inquiry based teaching techniques scales will help determine the degree of inquiry based learning in agricultural education.

Findings

- Concepts easily understood when science is integrated
- Takes more time to integrate
- Students are better able to understand agriculture when science is integrated
- Integrating science increases the ability to teach solving problems.
- Over half (56%) lack materials
- 56% noted lack of experience in science integration
- Most agreed support from administration
- Plan to increase the amount of science integration
- Greatest enrollment impact in high achieving students
- Overall enrollment increase
- Suggested that students complete early field experiences with teachers who integrate science.
- Teachers engaging in inquiry-type teaching strategies slightly more than two times a week.
- Students were asked to engage in inquiry-type activities slightly more than once per month.

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References

Ajzen, I. & Madden, T. J. (1986). Predictions of goal-directed behavior: Attitudes, perceptions, and perceived behavioral control. *Journal of Experimental Social Psychology, 4*(22), 453-474.

Dunbar, T. F. (2002). *Development and use of an instrument to measure scientific inquiry and related factors.* Unpublished doctoral dissertation: University of New Mexico, Albuquerque.

Thompson, G. W., & Schumacher, L. G. (1998). Selected characteristics of the National FFA Organization's agriscience teacher of the year award winners and their agriscience programs. *Journal of Agricultural Education, 39*(2), 50-60.

Students' Perceptions of Agriscience when Taught Through Inquiry-based Instruction

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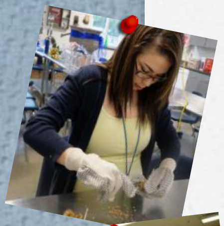




Introduction/Need for Research

- Students' motivation
  - To achieve in science is directly related to their attitudes toward science
    - Attitudes are shaped over time
    - Attitudes can be influenced by
      - Teacher
      - Instructional approach
  - Unfavorable attitudes can create a lack of motivation
- Inquiry-based instruction (IBI) aids
  - Deeper conceptual understanding
  - Scientific reasoning skill
  - Students' attitudes and perceptions toward learning science

Theoretical Framework

- Rooted in the constructivist theory:
  - Learner must construct knowledge
  - Teacher dictates less knowledge to the learner, but the teacher provides the context and facilitates learning

Methodology

- Descriptive survey research design
- Researcher developed instrument Cronbach's Alpha .83
- Population: seven National Agriscience Teacher Ambassador Academy (NATAA) participants' students (n=170)
- 12 week study
- Survey instrument administered at the end

Statement	SD %	D %	U %	A %	SA %
Agriscience is useful for solving everyday problems.	8.2	11.8	8.2	51.8	20
I preferred learning through inquiry over other ways I have been taught in the past.	8.2	15.9	31.7	32.4	11.8
I would like to take more courses that use inquiry-based instruction.	15.9	15.9	15.9	44.1	8.2
Agriscience is my favorite class.	8.2	0	24.1	47.7	20
Learning through inquiry was confusing.	15.9	35.9	20	28.2	0
When I think of agriculture, I don't think of science.	15.9	35.9	0	40	8.2
I enjoy working in groups.	8.2	3.6	0	48.2	40
I like using the computer to complete assignments.	0	11.8	8.2	32.3	47.7
You can get along perfectly well in everyday life without agriculture.	24.1	25.9	20	20	0
I feel at ease in the Agriscience classroom.	0	20	8.2	35.9	35.9
When I hear the word agriculture, I have a feeling of dislike.	52.4	23.5	8.2	11.8	4.1
I would like to have a career in agriculture.	8.2	15.8	05.8	40	20.2
Most people should study some agriculture.	8.2	24.1	15.8	47.7	4.2
I like learning new things.	3.5	8.2	8.2	40.1	40
You won't be popular is you like agriculture.	72.4	8.2	7.6	11.8	0
I enjoy doing lab activities in class.	8.2	11.8	0	40	40
I enjoy talk to other people about agriculture.	2.4	8.2	17	40	32.4
Working in groups helps me learn more.	2.4	8.2	17	32.4	40
I have a real desire to learn agriculture.	8.2	8.2	7.7	35.9	40
There is no science taught in my agriculture class.	71.8	24.1	2.4	1.7	0
Agriculture is of great importance to a country's development.	0	0	11.8	36.4	51.8

Note. SD = strongly disagree, D = disagree, U = uncertain, A = agree, SA = strongly agree





Results/Findings

- "Agriculture is of great importance to our country's development."
- "Disagreed that an individual could get along without agriculture in their everyday life."
- Students were interested in a career in agriculture
- Would like to take more courses that use IBI
- Would rather learn through IBI over other instructional methods

Conclusions/Implications/Recommendations

- IBI students responded positively toward agriscience regarding the importance of agriculture in their everyday lives.
- Supports the notion that IBI can build students' agriculture perceptions
- IBI should be used to address the need to develop more science driven students in agriculture

References

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National Research Council (NRC). 1996. *National scienceeducation standards*. Washington, DC: National Academy Press.

Sandoval, W. A., & Harven, A. M. (2011). Urban middle school students' perceptions of the value and difficulty of inquiry. *Journal of Science Education and Technology, 20,* 95-109. doi:10.1007/s10956-010-9237-4

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eLearning as a Tool for Faculty Development Prior to Delivering Learner-Centered Workshops in International Settings

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Problem Statement:

So, you're going to travel out of the country. Now what?

◊ Need for globalization of curriculum
◊ Faculty lack experience in international engagement

Purpose:

Development of a tool which promotes globalization and prepares faculty for international engagement.

Future Plans:

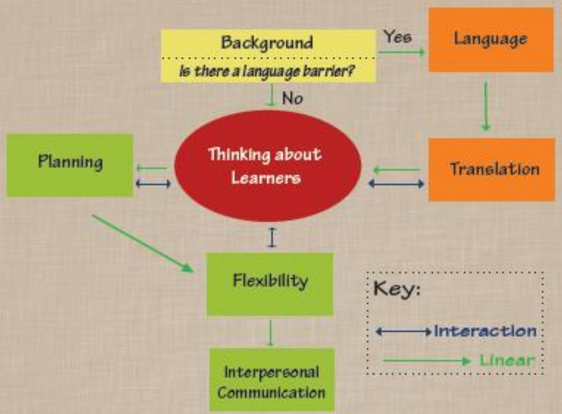
◊ Development of the international preparation module, with input from stakeholder groups to aid in development of a web-based version.

◊ Use the module as a tool to serve
- Undergraduate student interns seeking international experience.
- University extension training as they focus on learners at the local and international level.

How it works:

◊ Computer-based self-paced prepartion module.
◊ Faculty will work through a series of scenarios and be asked to think critically.

◊ The module will bring the learner through the thought process of developing a workshop within a given context.
- Background information- country, overall project and participants.
- Planning - narrowing the focus, goals and objectives.
- Flexibility - remaining flexible for many factors.
- Language - true meaning of an idea.
- Translation - translators familiar with the content.
- Interpersonal connections - making connections with participants.
- The learners - social learners, inquisitiveness, innovative, conservative.



Implications:

Faculty should be better prepared for curricular decisions and more comfortable in international development and study abroad programs.

Resources Needed:

◊ College web-design professionals
◊ Creators with previous foreign travel and workshop participation
◊ Appropriate learning theories

References:

Cano, J., Brown, D., Ewing, J., Valez, J., Whittington, S. (2006, July) *Key strategies for communicating across language barriers.* Paper presented at the 2006 NACTA Conference, Vancouver, British Columbia.

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