EFFECTS OF EXPERIMENT AND EDUCATION IN ART

DELDARFARD

Shiraz University, Iran
E-mail:conferenceseventsoffice@gmail.com

Abstract -Educators have put forward two main justifications for including the arts in formal school curricula. One argument is intrinsic to the arts. It maintains that the arts are important components of human culture in and of themselves and that, as such, they ought to be included as school subjects on an equal footing with other cultural disciplines such as literature or history. The intrinsic argument can lead to either of two pedagogical approaches. Model fitting to experimental results is presented within the context of graduate physics laboratories and generalized to other graduate and post-graduate levels, and diverse research fields. In most cases the analysis of experimental results, in terms of mathematical models available to describe the obtained results, extends beyond the numerical minimization of statistical estimators, like the chi-square, in the model's parameter space. Dedicated fitting procedures, not easily or directly available in common data analysis software's packages, are required to obtain the best fitting set of parameters that present a consistent physical meaning. A simple but powerful web-based solution is presented, and its relative advantage in comparison with known commercial and open source solutions is discussed.

Keywords - Art, Experimental, Women, Education.

I. INTRODUCTION

How do artists describe their paintings? They talk about their works using several different concepts. The elements of art are the basic ways in which artists talk about their works. Some of the elements of art include space, texture, form, shape, color, tone and line. Each work of art can, in the most general sense, be described using these seven concepts. Another important descriptive set is the principles of art. These include movement, unity, harmony, variety, balance, contrast, proportion, and pattern. Other topics may include subject matter, brushstrokes, meaning, and historical context. As seen, the reare many descriptive attributes in which works of art can be talked about.

II. ISSUES RELATED TO TRANSFER OF ARTS LEARNING

In recent decades a growing justification for the arts in North America has been an instrumental one claiming that the arts have social, motivational, and academic repercussions. This justification is based upon a growing body of research that suggests experiences in the arts produce cognitive and social skills that transfer to other domains of cognitive activity and learning.

However, the suggestion of “transfer of learning” has initiated heated debate within the arts education community and within the broader educational field. Within the context of educational and psychological research, transfer of learning, where learning in one domain enhances learning in another domain, has proven to be extremely difficult to achieve, if at all, and more so, difficult to detect (Catterall, 2002c). Thus, the suggestion of learning transfer in arts education has been met with much skepticism. Further, research findings can be miscon struedsuch as the now famous “Mozart Effect”.

III. TRADITIONAL, POPULAR, ELITE: AND THE UNOFFICIAL

Despite its slipperiness, the term popular has in fact been deployed with remarkable unanimity by the majority of Africanist scholars in a tripartite scheme which closely imitates the European one. With only a few significant exceptions, to which I shall return, the mainstream school of Africanists has divided African culture into three layers: "traditional", "popular", and "elite."

This simple typology has shown itself remarkably resilient and tenacious. Even when criticized, it has usually managed to resurface amidst a welter of disclaimers and qualifications; but for the most part it has survived by not being criticized, or even examined. It has simply been applied, as if its correspondence to African social reality were self-evident. Yet what is so striking about the use of this model by African ists is that it is not really tripartite at all. It is in fact composed of only two positive terms, with a fluctuating, undefined, and shapeless space between them.

Popular arts have usually been defined in terms of what they are not. In this model, they are not traditional arts transmitted more or less intact, though slowly changing, from a precolonial past. Nor are they elite or high arts produced by the educated few who have assimilated European languages, forms, and conventions more or less thoroughly. Popular is usually left as as hapeless residual category, its borders defined only by juxtaposition with the clearly demarcated traditionalandelite categories.

IV. ASSEMBLAGES

All exhibitions entail the bringing together of unlikely assemblages ofpeople, things, ideas, texts, spaces, and different media. Curators, designers,artists, anthropologists, sponsors, visitors, artworks, artifacts, antiquities,machines, installations, display cases, spotlights, photographs,moving images, catalogues, promotional materials, object labels, audiotours, gallery guides – we might say that these constitute the apparatus ofthe exhibition experiment. As Weibel and Latour note, they are highlyartificial assemblages, brought together for no other reason than theexperiment itself, and yet their purpose remains to make visible thatwhich is otherwise invisible, to make tangible something intangible(Shapin and Schaffer 1985). The alchemy through which this transformationis brought about is another of the themes that run through many of thechapters of the paper.

Reflecting on the social, creative, and bureaucratic negotiations involvedin staging a major exhibition at Chicago's Museum of Science and Industry, Lorimer suggests that there is indeed ''magic'' involved in the design process. Charged with the task of translating concepts in to material forms (giving ''body'' to the concept of ''mind,'' for example),Lorimer argues that for exhibition developers the process of assembling the components of a display may be better understood as a process of discovery, in which the exhibition takes on a ''ghostly'' life of its own, disrupting its creators' intentions and leading to serendipitous encounters. As the apparatus of the exhibition is assembled, in the museum work shop as much as on the gallery floor, so the different components interact with each other, generating new and unanticipated outcomes.

V. THE ARTS AND ACADEMIC ACHIEVEMENT: THE PROJECT ZERO META-ANALYSES

In order to examine what the research actually shows with respect to transfer of arts learning, anextensive survey of quantitative research that examined the effects of arts education on academic achievement was conducted by Harvard's Project Zero under the direction of Ellen Winner and Lois Hetland (2000).

In this research review, comprehensive and exhaustive searches were conducted to find all relevant research, published and unpublished, that linked an individual art form (music, drama, visual art, and dance) or the arts generally (all forms combined) withspecific cognitive and academic outcomes. The studies were analyzed using the method of metaanalysis.

Meta-analysis is group of quantitative methods used to integrate the statistical resultsfrom a number of quantitative studies to assess the size of the effect of some variable orcondition (e.g., the effect of learning in the arts on academic achievement). An effect size, whichis the key data for meta-analysis, indicates the degree of relationship between two variables. Aneffect size is calculated for each study and then combined and compared with the effect sizescalculated for all the studies included in the analysis. Meta-analysis can show the moderating effect of sample size, research design, specific outcome measures, and other moderating variables that may impact the results. Thus meta-analysis provides a valuable means for identifying possible explanatory variables in the area of research being examined. While meta analyses have been conducted in many fields of research, the use of meta-analysis in art education is a new application. Because meta-analysis is a means of systematically addressing specific questions within the context of existing research, in this particular case: Does arts experience increase academic achievement?, it is a means of determining the current state of knowledge about a particular phenomenon and is thus a valuable method for guiding the direction of future research.

CONCLUSION

This paper scratches the surface of the problem of automated discovery of artistinfluence, through the study of painting and artist similarity. We posed the interesting question of finding influence between painters as a knowledge discovery problem and showed interesting results for both of the qualitative andquantitative measurements.

Experimental research is concerned with cause-and-effect relationships and involves the random assignment of participants to experimental and control (comparison) groups and the manipulation of independent variables.

REFERENCES

[1] E. Abdel-Hakim and A. A. Farag. Csift: A sift descriptor with color invariantcharacteristics. In IEEE Conference on Computer Vision and Pattern Recognition,CVPR, 2006.

[2] Ravneet Singh Arora and Ahmed M. Elgammal. Towards automated classificationof fine-art painting style: A comparative study. In ICPR, 2012.

[3] Mikhail Belkin and ParthaNiyogi. Laplacianeigenmaps for dimensionality reductionand data representation. Neural Computation, 15:1373–1396, 2002.

[4] Borg and P.J.F. Groenen. Modern Multidimensional Scaling: Theory and Applications.Springer, 2005.

[5] LaPierre, S. D., & Zimmerman, E. (Eds.). (1997). Research methods and methodologies for art

[6] education. Reston, VA: National Art Education Association.

[7] MacNealy, M. S. (1999). Strategies for empirical research in writing. Needham Heights, MA:

[8] Allyn & Bacon.

[9] McMillan, J. H., &Wergin, J. F. (1998). Understanding and evaluating educational research.

[10] Upper Saddle River, NJ: Prentice-Hall.

[11] Wolcott, H. F. (1994). Transforming qualitative data. Thousand Oaks, CA: Sage.