

Understanding the Creative Learners' Perspective on Traditional Filipino Arts through Personal Meaning Mapping

Abstract

This paper documents the learning experiences of students in an exploratory integration of traditional Filipino arts in various courses in a Philippine tertiary institution of art and design. The lessons on traditional Filipino arts were conveyed through classroom lectures by teachers, talks by invited experts on Philippine culture and the arts, and through art-making demonstrations by teachers and traditional artists. A major activity for the participating classes was the '*Visiting Artist Project*', a form of situated learning, where students experienced art-making with traditional art practitioners.

The trial inclusion of the learning of traditional Filipino arts in art and design courses is the third segment of a phenomenological, qualitative study that seeks to find answers to the central question 'Why and how should the study of traditional Filipino arts be integrated in the art and design program?'. We took an account of responses to this question from the lens of the student participants through Personal Meaning Mapping, our main tool of inquiry for this part of the study.

Findings of this study yielded indicators of learning, collectively called the *TFA learning index*, which can be employed to guide the development of creative strategies for the learning of traditional Filipino arts.

Key words: Art and design education, creative learners, Personal Meaning Mapping, traditional Filipino arts.

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Introduction

This paper presents the third segment of a phenomenological, qualitative study on the integration of traditional Filipino arts (TFA) in tertiary art and design education in the Philippines. It highlights the learning experiences of student participants, including their art-making activities and interaction with traditional artists. Student feedback regarding the learning process will form part of the multiple perspectives that will be used to provide answers to the central question: Why and how should the study of traditional Filipino arts be integrated in the art and design program?

The Philippine Commission on Higher Education includes in its mandate, the enrichment of historical and cultural heritage (CHED, 2000). This, in effect, is an acknowledgment of the fundamental role of education to pass on a body of inherited cultural values, beliefs and practices to the younger generation (Bentley, 1998). Landa Jocano (1998) asserts that Filipinos need to recognize traditional knowledge as a resource for development. He claims that our recognition of our past accomplishments will provide us with the strength and confidence to 'secure the foundation of our contemporary institutions. Landa Jocano (1998) explains that a people's competence need not be articulated in the form of grand structures. They can be expressed in art forms, in intricate designs on gold or jade ornaments... and in rice terracing (Landa Jocano,1998). From this stems the query on the role of schools of art and design in the transmission of traditional Filipino arts.

Congdon (1987), in her study on folk art for formal education, cites a number of art

educators (Chalmers, 1978, 1981; Feldman, 1980; Grigsby, 1977; Lanier, 1980, 1982; McFee & Degge, 1977) who advocate the inclusion of folk art in art education curricula, but adds that no adequate approach to the study of folk art has been developed, leaving art teachers without a focus for presenting folk art to students. While the statement refers specifically to American art education, it parallels our own need for a well-defined effort for integrating our own traditional arts in art and design education. This requires a learning approach that will establish Filipino art as 'living tradition' (Fajardo, 2002). The search necessarily includes looking into ways of learning that are appropriate for creative learners.

The learning context

In the preceding segment of this study, teachers participated in an in-service training program to prepare for the trial inclusion of traditional Filipino arts in their respective classes. They introduced various traditional local art forms in lecture courses such as History of Philippine Art, Art Appreciation, and Natural Science, and in studio courses such as Decorative Arts, and Package Design. To make certain that our trial program does not cause undue disruption in the teachers' course syllabi and in their handling of classes, we asked the teachers to integrate traditional arts in their respective courses as they deemed appropriate. The teachers selected specific art forms to include in their lessons from among those they learned during their in-service training. Traditional arts and indigenous materials were introduced to students through classroom lectures, video and Powerpoint presentations. These were supplemented by talks on Philippine arts and culture by educators who specialize in research on specific local art forms.

The students learned traditional art making processes in various ways. A number of classes experienced learning directly from traditional artists during field visits as part of the *Visiting Artist Project*. As a form of situated learning, it is based on the concept of learning as a social activity. Situated learning, as observed in this study, is the kind of learning typical of traditional societies which occurs primarily through the act of doing rather than in some form of abstract instruction or schooling (Street, 2005). Some classes assigned group representatives to engage in the art making process while others documented it through video or photographs. For classes that opted for classroom learning, traditional artists were invited to demonstrate their art form in school. After these activities, teachers assigned individual plates and group projects to students.

The Method

Personal Meaning Mapping (PMM) is a research tool developed by John Falk and researchers at the Institute for Learning Innovation (Adams, Falk & Dierking, 2003). PMM was designed to ‘measure how a specific learning experience uniquely affects each individual’s understanding or meaning-making process’ in the assumption that learners have different levels of knowledge and experience. The ‘socio-cultural’ milieu and the physical context of the experience are factored in as major considerations (Adams, Falk & Dierking, 2003).

We used PMM to inquire into the students’ understanding of Filipino arts and what constitutes their cultural constructs. Cultural constructs, in this study, refer to an individual’s concepts and values that collectively shape the ways of a society or a people as manifested through language and practices, including art. Having a grasp of the learners’ cultural constructs could help provide art educators with direction for

identifying course content and developing teaching methods. Further, we wanted to know if the TFA learning experience caused any change in the students' understanding of local traditional arts, and Filipino arts, in general. The major insight of PMM is that quality learning changes people; the better the experience, the greater the change (Adams, Falk & Dierking 2003).

Prior to the activities on traditional Filipino arts, we conducted PMM pre-tests with participating classes. We asked students to write the (pre-tested) prompting word 'Filipino art' on paper and then to draw and/or write down as many images and words related to Filipino art as they come to mind. The responses drawn and/or written down by each student, each using a crayon, formed the basis for an open-ended interview after the pre-test. Data collectors then encourage students to explain their responses and to expand on their ideas. The students' explanations were written down by the data collectors on the same piece of paper. Color-coding was used to distinguish students' response from the data collector's notes.

After the TFA activities, students were asked to review their initial thoughts and were allowed to add to, or modify their PMM responses. These were again discussed with data collectors. Again, color-coding was employed to distinguish the students' input from those of the data collector.

We modified the PMM data collection process to suit a classroom setting and in consideration of the relatively large number of respondents. Ordinarily, PMM respondents are given as much time as they want to draw and write down responses, However, a time limit was set for the PMM tests as they could only be conducted

between class periods. Also, to facilitate the open-ended interviews for classes with more than twenty-five students, we paired respondents and asked them to alternately take on the role of the respondent and data collector, guided by simple, clearly-stated written instructions. We ensured the proper observation of procedures through monitoring.

PMM data were processed using both quantitative and qualitative methods, although statistical treatment was limited to determining the gender ratio of respondents, and the ratio of respondents against the total number of TFA student participants. Also, pre-test and post-test responses were counted, grouped and ranked according to the frequency by which respondents indicated them. Pre-test and post-test results were carefully reviewed and compared for indications of change.

Qualitatively, and in accordance with the etic tradition, PMM statements in Filipino were mindfully translated in English to ensure that they are in keeping with their original meaning. All statements were then recorded and prepared for cool analysis. Statements were carefully read and re-read to discern emerging themes and categories during the warm analysis. Observation and photographs taken of classrooms art making activities and on-site learning supplemented PMM findings.

The learners

A total of 603 art and design students attended TFA classes while 531 students took part in the PMM tests. The respondents consisted of twenty-three students of painting, 47 students of industrial design, 186 students of interior design and 275 students of advertising arts. These were first to third year level students with ages ranging from

16 to 19 years. One hundred ninety-three (193) male students and 338 female students accomplished the PMM tests, accounting for 88% of the total number of TFA students.

Findings

Interestingly, twenty-four categories emerged from the total number of responses indicated by the student participants to describe or illustrate their understanding of Filipino art. We ranked the categories from highest to lowest, based on the frequency by which they were indicated by students in both their pre-test and post-test responses. The categories are as follows: (1) nature, (2) handicrafts items, (3) arts, trade, (4) events and trimming, (5) Filipino music, (6) national symbols, (7) local structures, (8) visual arts, (9) values, (10) literature, (11) indigenous materials, (12) dance, (13) people, (14) Filipino food, (15) means of travel, (16) traditional wear, (17) belief, (18) Filipino games/sports, (19) other arts, (20) other relevant terms, (21) cliché landscape, (22) places, (23) Filipino customs, and (24) art practitioners.

Student respondents relate Filipino art with nature because they perceive it as a *'resource for our arts'*. In their pre-test responses, they explain that *'much of our arts are based on nature because we are rich in natural resources'*. The coconut tree is identified as an outstanding example of a source of raw material: *'All parts of the coconut tree can be used. (For example) farmers wear hats made of coconut leaves'*. They also express appreciation for hand-made articles that are fashioned from these organic materials; *'Handcrafted items are beautiful. They are intricate.'* Further, many of the respondents acknowledge that *'we have to take care of our environment*

to sustain our arts.'

Student respondents perceive the presence and role of Filipino art in history, culture and religion. Some link Filipino art to the country's pre-colonial and post-colonial past: '*Filipino art is from our indigenous culture*'; '*Filipino art reminds us of a rich culture long forgotten because of colonialism...though we were colonized, our art has managed to be lively and dynamic.*' To others, it '*reflects and portrays our history, religion and way of life*'; Filipino art intertwines culture and religion because, as one respondent states, '*The most celebrated part of our culture is religion*' and because '*religion is still very much in the center of our arts.*' This is demonstrated by the fact that we '*thank God by way of our fiestas and festivals.*' Students relate the bright, festive colors of Filipino art with Filipino traits of being '*active, happy and optimistic as a people.*' Terms such as the '*unknown craftsman*' and '*dream weavers*' and the names of at least two traditional artists they have encountered make up the category for local art practitioners. Students describe local artists as '*creative and resourceful, hard-working and innovative.*' They also see '*music, literature, poetry, dance, culinary arts, rituals and languages as part of Filipino art*'.

Because post-test items are actually additional responses, they were expectedly fewer than pre-test images and words. However, post-test items outnumbered pre-test items in categories such as 'crafts and/or hand-crafted items', 'events & trimmings', 'values', 'arts and trade', 'places', and 'other terms related to arts & culture'. Specific regional festivals that were discussed in class, traditional art forms and terms related to art-making processes were the additional items in these categories. Items for the category on 'values' increased with the addition of '*meaningful art*' to words such as

'*patience*', '*passion for work*', '*made by hand*', '*perseverance*', '*creativity*', and '*tradition in art*'. The inclusion of provinces and regional sites of TFA field activities accounted for the increase in responses in the category for 'places'.

Also, as PMM respondents expressed their thoughts freely, some items were present in both pre-test and post-test results, though not necessarily drawn or written by the same person. Changes were seen in the manner by which some terms were used. For example, images under the category of nature that were collectively described as natural resources in the pre-test were identified as motif for specific art forms in the post-test. The church structure, which was linked with religiosity in the pre-test was described as a heritage site in the post-test. The image of people holding hands, which symbolized togetherness in the pre-test, represented a family of abalorio (traditional beadwork) artists in the post-test. Some students added drawings of themselves and their group mates working on their art project.

A respondent stated that he '*represented Filipino art with elements of nature other than a cliché landscape.*' Here, a '*cliché landscape*' refers to a visual representation of a typical rural scene in the Philippines, which was once a common subject for local painters and even for school children. The '*cliché landscape*' appeared in 12% of the PMM works. The implication of the common rural scene becoming less common could be included in a study on fading local images that are being replaced by icons of modern culture.

We relate Dierking's (1992) questions on the essence of learning to the learning of traditional arts: 'Is learning a greater amount of knowledge? A greater amount of

feeling?...Or is it a change in the way we think about something or do something?’

(25) Or, in the case of art students, is it merely the enhancement of drawing skills and technical knowledge?

Post-test findings reveal that learning on-site, encounters with traditional art practitioners and the art-making activities were among the most remembered aspects of the TFA learning experience. The students’ thick descriptions of their art-making and other activities which were subjected to phenomenological reduction brought forth themes that indicate aspects by which learning occurred. The emerging indicators in the learning of traditional Filipino arts, or the *TFA learning index*, are a) *learning recall*, b) *critical reflection*, and c) *indicators of change*.

Learning recall

When student participants looked back on their art-making experiences, some common aspects about prior learning emerged from their statements. A freshman student of interior design shared that the *‘pastillas’ wrapper (rice-paper cutting) was more difficult to make than the abalorio (traditional beadwork)’*, adding that she has *‘a background in sewing and cross-stitching.’* Another student explained that she was into fashion, *‘that’s why I was interested with the abalorio.’* While another stated that she enjoyed doing beadwork because she was *‘interested with beads and have been collecting them since high school.’* However, one student considered learning both art forms *‘a negative experience’*, and explained that he was *‘not familiar with Filipino art and never knew that these arts existed.’*

Dierking (1996) underscores the essential role of memory in learning: ‘What seems to make something learned is that it does have lasting power’. Memory also connects past learning with recent learning experiences (Dierking,1996). Hein (1996) delineates the same concept as a constructivist principle: One needs knowledge to learn: it is not possible to assimilate new knowledge without having some structure developed from previous knowledge to build on. The importance of memory and recall in learning are further accentuated by the findings in cognitive science that prior knowledge and experience in the cognitive domain are the most essential predictors of ‘how much a person can learn’ (Dierking,1996). While the student participants may consider the learning of traditional arts as a new experience, they have prior knowledge to build upon in terms of creative principles, art making processes, materials and their attributes, and techniques. Also, in learning traditional arts, they can strengthen their values and develop skills and discipline, which could serve them well in learning any other form of art.

Dierking (1996) further distinguishes the function of recollection in learning. Termed as ‘retrieval and transfer’, it is the process that enables learners to employ stored information and knowledge as the need arises. In the case of the TFA learning experience, some students considered the use of traditional arts in their personal art and in their professional practice. As a junior student of interior design said, *‘I like traditional arts so I will use them in my designs. If I had a client who preferred a native theme, it would be embarrassing not to know about them.’* Others found its relevance in developing designing skills. Several students put their TFA learning into practice sooner than expected, as revealed by these statements:

‘I inspired and taught my sisters to do beadwork.’

'I used paper-cutting motifs for the illuminators I made for my sister's wedding. I got the idea from our 'pastillas' wrapper-making activity.'

As Dierking (1996) and Hein (1996) explain, the time within which people process learning differs from one person to the next.

Critical reflection

Clemons (2006) counts reflection among the essential factors that improve learning. Both Clemons (2006) and Hein (1996) cite Dewey's (1916) concept of a 'reflective activity' that engages both the body and the mind. Such an activity enhances learning because it stimulates meaning-making. The TFA art-making activities were both 'hands-on and minds-on' (Hein,1996), as revealed by the PMM post-test, which in itself, was a creative form of post-activity reflective process for the student participants. Third level advertising students had the following reflections on their group project:

'Making the diorama of traditional art forms was difficult and hard on the hands, especially the bamboo craft, but it looked beautiful when we finished it.'

'It was not easy. We had to conceptualize a theme and working as a group required patience but it was a happy experience. It was interesting.'

Hein (1996) states that it takes time to learn; for significant learning we need to revisit ideas, ponder on them, try them out, play with them and use them. Drawing from Valli's (1997) typology of reflective thinking, we consider personalistic reflection that develops into critical reflection as most beneficial for learning. In Valli's (1997) concept of critical reflection, individuals think of how their actions relate to dimensions outside of their personal concerns. We cite the following reflective statements by the sophomore students of interior design about making the abalorio:

'The abalorio was a new thing for me. I enjoyed doing beadwork even if my stitching was a bit crude and my thread bundled up in knots on the backside of the cloth. It was time consuming and difficult, but it is worth passing on to others. Later on, I learned to appreciate the abalorio as part of our heritage.'

'I remember the techniques and requirements for making our beadwork look good. I learned that even if the design is difficult to execute, it should still be done in the right way. It reminds me of the creative people in the provinces who work hard to make crafts for the use of a lot of people today.'

Indicators of change

We cite the following statements of student participants who do not agree with the inclusion of traditional arts in art and design courses:

'Nothing changed in my perception of Filipino art. It was a good experience but I did not pick up any value. We do not practice traditional arts anymore.'

'Traditional arts are not relevant in these are modern times. We have to catch the attention of people who like Western stuff.'

These statements call attention to the essential role of motivation in learning. Hein (1996) qualifies the definition of motivation as including an understanding of ways in which knowledge can be used. He explains that 'Unless we know 'the reasons why', we may not be very involved in using the knowledge that may be instilled in us...' (Hein 1996). Related to this is Dierking's (1996) contention that 'prior attitudes and beliefs' should be well considered for their role in shaping what and how we learn. Thus, we see that an altered perception and understanding of traditional arts matter immensely as indicators of a person's disposition towards learning. We consider the following statements from student participants as evidence of change in perspective and attitude towards traditional arts:

'It was hard to make something without ready-made components. We learned to value our local materials and to be resourceful.'

'I learned about being passionate about one's art from the traditional artist. One has to have the passion and creativity to create traditional arts.'

'My views about traditional arts have changed. All I knew of Filipino art were fiestas, colorful buntings and traditional houses, but now I see our arts differently because of our workshop activities.'

'It was worth my while to learn about a traditional activity. It improved my sewing skills. In our group work, it improved our creativity in designing.'

Moreover, in the following statements, we note the values that student participants attach to traditional arts that could motivate them to continue learning the art forms:

'As students of advertising arts, there are important things for us to learn from our traditional arts. We should base our work on what we think can uplift Filipino art...the essence of Filipino culture should be present in our advertisements.'

'As an industrial designer, I can explore the use of indigenous materials to create design concepts that are simple and sustainable. Our traditional arts provide evidence that Filipinos can make art.'

'It was my first time to work with the abalorio materials, I was challenged and motivated to make my design more beautiful.'

'The traditional arts are the foundation of Filipino art. We have to value them because without them, there can be no Filipino art.'

Discussion

Learning recall, critical reflection and indicators of change, as components of the *TFA learning index*, are necessarily bound together in terms of use and purpose in the learning of traditional arts, not only as art forms but as a cultural practice.

Learning recall will allow students to relate their past and present knowledge on art and aesthetics to what they have recently learned from their TFA experience. Traditional arts will provide them with the grounding they need to develop Filipino art. However, the interest to engage in traditional art activities requires an appreciation of traditional arts and its artistic, cultural and social values that can only result from a *critical reflection* on what it means to their lives as Filipino artists and its place in the bigger scheme of things. Only then can we expect to perceive

indicators of change in the creative learners' disposition and enthusiasm towards traditional arts.

Knowledge about the cultural constructs and the *TFA learning index* of the student participants could enable educational planners to respond to the needs of TFA learners more effectively. TFA lessons can be purposefully designed to draw on the students' prior knowledge to allow for 'connections' to be built, for instance, between traditional art processes and art-making as currently practiced in the school of art and design. Lessons and art-making activities can be planned to stimulate critical and creative thinking. TFA lessons can be directed at understanding the place of traditional arts in the community and in society so that students can better appreciate its relevance. As Hein (1996) suggests, educators need to plan situations for learning, which will allow students to create meaning. Constructing meaning is learning; there is no other kind (Hein 1996).

The *TFA learning index* cannot be solely attributed to *the Visiting Artist Project* as the TFA learning experience was made up of a variety of activities that were undertaken either in school or in the field. However, the contributions of situated learning are reflected in the participants' comments about their learning experiences. Their statements affirm the constructivist principle that learning is a social activity. As Hein (1996) explains, 'Our learning is intimately associated with our connection with other human beings, our teachers our peers, our family as well as casual acquaintances'.

The benefits of situated learning are also evident in the students' reflections on their interaction with traditional artists. They expressed appreciation for the values of good craftsmanship and perseverance maintained by traditional artists, which are the same

values that the school of art and design aims to develop in students. The field visit was an opportunity for the participants to learn from the examples set by the traditional artists in their art practice. Lave and Wenger's (1991) concept of relationships between newcomers and old-timers and about activities, identities, artifacts, and communities of knowledge and practice is particularly illustrative of the factors and dynamics involved in the learning of traditional arts outside of the usual school setting by people from the academe. The 'zone of proximal development' is another term linked to situated learning, which depicts interaction among learners and facilitators of learning. It 'refers to a level of understanding that is possible when a learner engages in a task with the help of a more expert peer (i.e., teacher, traditional artist).' (Hein,1996). Also, Brown, Collins and Duguid (1989) offer that 'situations' are now perceived as 'co-producers of knowledge through activity'.

Studies support the idea that the 'novelty' that comes with situated learning suits the learning style of creative learners. In their study on how designers perceive and learn about their world, Caban, G., Scott, C. and Sweica (2000) cite the findings of Newland, Powel and Creed (1987) about the designer's learning style: Their strengths are in doing things, carrying out plans and becoming involved in new experience. They are divergent thinkers with imaginative abilities and an awareness of meaning and values. Designers are also perceived to be 'better suited to an intuitive, artistic approach than a systematic, scientific one' (Caban, Scott, & Sweica, 2000).

What could be considered as a most favorable outcome from the students' TFA learning experience is for students to develop a genuine interest in traditional arts borne out of a better understanding of its socio-cultural context. Ramsden (1992) and

Smith (1999) place more emphasis on a learner's change in worldview as a result of learning acquired through a transformative experience rather than the more outward manifestation of change in behavior. The statements made by the student participants are hopeful signs of a transformation that could make possible, the effective transmission of traditional Filipino arts.

Conclusion

This segment of the study has demonstrated the ways by which traditional Filipino arts can be presented as course content to students of art and design. The findings of the study show the value of both positive and negative feedback from students as input for planning learning situations for creative learners. Information about the students' cultural constructs and the TFA learning indicators can be a rich resource for refining methods of facilitating lessons and activities. The PMM data can be sourced for more information on other aspects concerning the learners, as for instance, a closer examination of cultural diversity among students. The *Visiting Artist Project*, as a situated learning activity, requires a serious consideration of factors such as the number of student participants, activity venues, and other logistic concerns to enhance opportunities for positive learning experiences.

We emphasize the need to direct students' learning towards an understanding of traditional arts in their aesthetic, social and cultural dimensions for a meaningful appreciation of its value. This has implications on research and the provision of instructional materials, and a greater implication on administrative support in matters such as curriculum revision and materials and equipment.

Securing a place for traditional Filipino arts in art and design education should be considered for its aesthetic, extrinsic and intrinsic worth.

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1. This manuscript is appropriate as an article;
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3. Comments and suggestions for revisions:
This study, with its large sample size, adds to the knowledge base supporting the usefulness of situated learning as an effective curricular strategy. Some clarifications should be included to address potential bias and methodological appropriateness.

Major Concerns

1. The authors' review of previous literature should be more concise and focused on the main theme. The current paper is not very coherent or concise, and is somewhat unorganized. The authors should remove literature review sections that are not directly related to the main theme of the current study.
2. The authors should state their personal stake in the research. They should clearly state their relationship to the Visiting Artist Project.
3. The authors should state or give examples of the "simple, clearly-stated written instructions" used for the follow up interviews. In addition, were these the same instructions used for pre and post interviews? Please indicate.
4. The authors should provide the time interval between pre and posttest.
5. The authors should provide a critical analysis of the sample (i.e. How the gender imbalance of the sample—64% female—relates to the population parameters.).

Minor Concerns

Overall suggestions:

1. Since the authors cite indicators of change, the addition of a simple theme frequency comparison between pre and post responses would strengthen their argument.
2. Zone of proximal development: "the range of knowledge and skills that students are not yet ready to learn on their own but can learn with help from their teachers" (Tharp & Gallimore, 1988; in Brophy, *Motivating Students to Learn*, 2004. p.67). While the statement (on page 16) is partially correct, the authors may wish to emphasize the effectiveness of situated learning in encouraging the engagement and motivation of students by its ability to address the wide range of zones present in any group of students. Situated learning is an excellent way of engaging, motivating, and addressing zones of proximal development, and I think that the authors may want to stress this a bit more.
3. The use of the terms pretest and posttest seems a bit misleading since the activity appears to function primarily as an artifice to pro-generate the interview.

More specific suggestions for each section are below:

4. The entire manuscript including the references section should be double-spaced and no additional space between paragraphs. In the body text, the first line of each paragraph should be indented.

Abstract

5. The abstract section is too long and should be shortened and made more concise. The abstract should include no more than 120 words.
6. The current abstract has three paragraphs.--it should be one paragraph.
7. The number and type of participants should be described in the abstract.
8. The TFA in "the TFA learning index" in the last paragraph of the abstract should be spelled when it is shown the first time in the manuscript. I assume TFA stands for Traditional Filipino Arts. When the authors state the Traditional Filipino Arts in the second line of the first paragraph, they should add TFA right after that, e.g., "~Traditional Filipino Arts (TFA) in various courses~" so that they can use TFA without any further indications.

Introduction

9. CHED should be spelled out when it is used the first time.

10. Only last names of the authors should be stated when making in line citation in the body text. E.g., Jocano (1998), (Jocano, 1998)
11. The past tense should be used for the entire literature review section. e.g., Jocano (1998) asserted that ~
12. When the same study is mentioned more than once in the same paragraph, after the first citation, the last names of the authors should be indicated without the year of publication. E.g., Jocano explained that ~
13. The authors stated, “ ~our recognition of our past accomplishments will~” For clarity, the use of “we,” “our,” “us” should be restricted to refer only to the authors and coauthors for the entire manuscript. Broader uses of “we” leave the readers to determine to whom the authors are referring; instead “we” should be substituted with an appropriate noun: Some alternative to “we” to consider are people, humans, researchers, and so on.
14. The authors stated: “~a people’s competence need not be articulated in the form of grand structures. They can be expressed in art forms,~” “a people’s competence” is awkward. It should be changed. In addition, what is “They” referring to? It should be specifically defined.

Method

15. For (Adams, Falk & Dierking, 2003), a “comma” should be placed between “Falk” and “&.” Once (Adams, Falk, & Dierking, 2003) is stated, when it is cited again, only “(Adams et al.)” should be placed. According to the APA Style, it says: “when a work has three, four, or five authors, cite all authors the first time the reference occurs; in subsequent citations, include only the surname of the first author followed by et al. and the year if it is the first citation of the reference within a paragraph.”
Please check the entire manuscript based on the APA style accordingly. E.g., No bold letters anywhere in the paper, etc.

References

16. The references section should start on a new page. The references section should be double-spaced with no additional space (an entire row) between references.
17. References section should be checked based on the APA Style. E.g.,
 - For “Bentley, T. (1998),” “Routledge” should be placed at the end of the reference.
 - No extra space should be placed between a volume number and issue number.
 - Some issue numbers are unnecessary.

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* Due to the increase in the number of submitted articles and in the cost of publishing the journal three times a year, APER is no longer able to offer reviewers an honorarium. Your continuous professional contribution to the journal is greatly appreciated.

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 X Yes
 No

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3. Comments and suggestions for revisions or reasons for not acceptance:

I believe that the subject matter is an important topic that merits discussion and research -- especially for the East Asian school environments in which lecturing is a major teaching style. However, the findings do not seem original so that this paper may not be able to contribute to existing literature by adding new knowledge, instead I believe it reinforces the common understanding of the difference between the teaching styles and may merit publication because of that reinforcement. If it is considered for publication, I think that the paper needs to be heavily polished, updated, and very significantly revised prior to publication.

The authors' literature review is not comprehensive and much of it seems out-of-date. Parts of their literature review do not seem to be directly related to the hypotheses of the study. I think that more careful consideration of contemporary literature and adding something directly related to the hypotheses of the authors' study that integrates with their findings is essential. In addition, I wasn't fully sure what new findings, if any, were discovered by their study, however, as I stated before, I believe the study reinforces the common understanding of the difference between the teaching styles and may merit publication because of that reinforcement.

More specific suggestions are below:

Abstract

1. p.1, the type of subjects should be described in the abstract.
2. P.1, the measuring instruments used should be reported in the abstract

Introduction

3. P.2: Prior to the main literature review, the purpose of the study should be described, and the educational significance of the research should be provided.
4. Literature review is not very coherent or concise, and it is unorganized. Remove research results that are not directly related to the hypotheses of the current study and add more recent research results that are directly related to the hypotheses.

Participants

5. P.5, the authors should describe the participants of the study and how they were selected. It can be described without mentioning the name of a school or a college.

6. P.5, major characteristics of the sample should be described especially to decide whether the sampling allow for generalization to the population of interest.

Instruments

7. P.7, the instrument used should be described in terms of purpose and content. What kind of items? What level of learning? : High level (Evaluation or Synthesis), Medium level (Analysis or Application), or Low level (Comprehension or Knowledge) of learning?

Data Analysis

8. P. 10, what is the reason the authors ran an ANCOVA instead of two independent-samples t-tests?

Results

9. P.11, an interpretation of results should be in a discussion or a conclusion section instead of a result section: e.g., “Such finding was also reached by Yildirim et al. (2000) at lower levels of schooling, which Effect of Constructivist Learning on Student Achievement implies that learning in a constructivist environment may be more advantageous in the long run.

10.P.12, the results would be different depending on kinds of items and levels of learning.

Conclusion and Discussion

11.P.13, the authors’ conclusion was that the constructivist teaching style does not enhance current learning but it may enhance retention. They stated, “there were no significant mean differences in the post-test scores of learners subjected to social constructivist environment and traditional instruction.” However, the finding should be discussed in terms of its agreement or disagreement with previous research results.

There are, also, a few minor lapses in compliance with APA style guidelines which are:

- (a) The page numbers should be on the top right corner of the paper;
- (b) On p.1, the subtitle of “Abstract” should be centered;
- (c) On p. 2, “Vygotsky refuted the idea that academic concepts are simply acquired via processes of understanding,....” And “Tynjälä stated that academic concepts arise and are

formed...” should have the years for the references right after the researchers' names; and

(d) On p. 12, for the part, “a significant finding was that the retention of knowledge was more effective when learners were exposed to social constructivist environments in comparison with traditional instruction, which is also supported in other research studies (Yildirim et al., 2001)”, the authors should cite the primary sources in which the retention of knowledge was more effective when learners were exposed to social constructivist environments in comparison with traditional instruction, instead of citing a secondary source, “Yildirim et al., 2001.”

Effect of Constructivist Learning on Student Achievement in

Pre-service Teacher Education

Abstract

The purpose of this study was to understand the impact of social constructivist environment on student achievement in teacher education. An experimental design where the experimental group (n = 66) was subjected to social constructivist environments, and the control group (n = 59) was subjected to traditional learning instruction was used. All participants were administered an achievement test as a pre-test, and post-test. The same test was also administered as a retention test after a three-month summer holiday. Findings showed that there were no significant mean differences in student achievement in pre-test and post-test scores, however there was a significant difference in students' retention test scores in favour of the experimental group.

Keywords: Social constructivism, achievement, and teacher education

Introduction

Constructivism is a multifaceted educational philosophy that deals with the nature of knowledge and learning (Brooks & Brooks, 1993; Shunk, 1996). Constructivist educators' main emphasis is to place students in active, learner-centred processes, in which students are given the responsibility to make decisions about their own learning. Such learning environments include values such as small group collaboration, learner autonomy, generativity, reflectivity, and meaningfulness of task, which are apt to preparing learners for life-long learning (Simons, 1997; Stern, 1997). Since constructivism is grounded in social and collaborative nature of learning, it entails sharing responsibilities and ideas about problems in the higher levels of the cognitive domain. Dialogue is used as a cultural tool in the promotion of new knowledge. Thus, learning is not regarded as a confined struggle of an individual alone, rather it is an outcome of shared responsibilities utilised through social interactions.

Vygotsky refuted the idea that academic concepts are simply acquired via processes of understanding, or through teaching the child academic facts and helping them assimilate these concepts from an adult sphere of thinking. He underpinned that assimilation of concepts cannot be mastered solely through memorization, the individual needs to undergo higher levels of thinking. Tynjälä stated that academic concepts arise and are formed with the help of the most extreme tension in the activity of the individuals' own thinking, and the fact that the individual reaches a certain level peculiar to school age. As for concept formation more complex nature should exist between the processes of education and development (Vygotsky, 1994).

It is Vygotsky's social constructivism that indicates that knowledge is constructed through interactions in the social world. It abandons the traditional views, introduces a new range of theoretical departures, and values shared as opposed to individualist value investments (Gergen, 1994). Social constructivism provides with learning environments in which group discussion or social negotiation, inquiry, reciprocal teaching, humanistic education, computers, and hypermedia are utilized (Woolfolk, 2001).

Research shows that high school learners subjected to constructivist environments yield better learning outcomes compared to those achieved by peers conducted with the traditional whole-class method (Yildirim, Aksu, & Ozden, 2001). The collaborative nature in social constructivist learning environments help learners reflect on their existing knowledge structures, and through dialogue they accommodate new learning. Problem based learning is one of the important dimensions in creating social constructivist environments. Although research does not provide sufficient evidence that these environments are conducive to better learning, they have a huge impact on the acquisition of knowledge. Dochy et al. (2003) conducted a meta-analysis study including empirical studies that dealt with problem-based learning in tertiary education conducted in real-life classrooms. They found that for the knowledge related outcomes, the results suggested that the differences encountered in the first and second year disappeared later on. Yet, the students in the problem-based learning environment gained slightly less knowledge, but remembered more of the acquired knowledge.

Christianson (1999) measured student learning about diffusion and osmosis at three different universities. The instrument they used for comparison purposes tested the underlying knowledge of students in addition to their ability to answer factual questions

correctly. In two of the universities the teachers used a large lecture/laboratory approach, and in the experimental group the teacher used a small discussion/laboratory approach informed by constructivist theory. Results showed that the students in the small discussion/laboratory course gained more deep understandings about diffusion and osmosis. The author argued that such difference may have yielded from the time on task effect in which the teacher gave emphasis on depth rather breadth in the constructivist group. Next, student-centeredness provided learners to construct new knowledge, and, finally, the instructor/student ratio was more enjoyed in the small/discussion laboratory course.

Bischoff and Golden (2003) compared the effectiveness of two forms of knowledge mobilization task on pre-service elementary teachers' performance in solving a triangle fraction problem. The authors found that there was no significant difference in the frequency of successful solutions when compared with the control group. However, the social constructivist group was most successful at generating novel solutions to the triangle problem. Tynjälä (1999) examined the potential of constructivist environments for developing prerequisites of expert knowledge during university studies. The author found that the students in the constructivist group acquired more diversified knowledge compared to the traditional one.

Allegedly reporting that traditional classroom environment deals more with recalling information rather than assimilating it, Leidner and Fuller (1997) wanted to understand if the individual constructive learning mattered in student higher interest and performance in comparison with collaborative learning. Through a quasi-experimental design, the authors tried to understand student interest, understanding material and

student performance. They found that student interest and perception of learning was higher in the collaborative group. On the other hand, they found that constructive individually working students outperformed students that worked collaboratively before working individually. The authors argue that this finding may be used to supplement the traditional classroom environment.

The studies carried out so far have shown that constructivist learning processes are more likely to produce higher order thinking skills as compared to traditional environments (Dochy et al., 2003; Tynjälä, 1997), interest and motivation (Leidner & Fuller, 1997). However, this may not be the general trend in all areas and at all levels. And, an increasing number of research studies highlight the importance of constructivist teacher education in educating pre-service teachers (Lunenberg & Korthagen, 2003; Tatto, 1998; Tynjälä, 1999). Therefore, it was found crucial to conduct more research that aims at understanding the impact of the learning environment on student achievement in higher education. In line with this need, our particular research question was:

Is there a significant difference between experimental (subjected to social constructivist environment) and control groups' (traditional instruction) performance in Classroom Management course as measured through an achievement test?

Method

In this study the researchers used a pre-test and post-test experimental design. The independent variable was the treatment (social constructivist environment or traditional instruction); the dependent variables were pre-test, post-test performance and retention

test performance. The research design was constructed based on the following hypotheses:

Hypothesis 1: There is a significant difference between experimental and control groups' achievement scores.

Hypothesis 2: There is a significant difference between experimental and control groups' retention scores

Participants

The population consisted of 144 third year Foreign Language Education students at XXXXXXXXXX. All students were randomly assigned to four sections as a common policy of the institution. For this study, two sections out of those four were randomly selected for the social constructivist implementation. The remaining two sections were subjected to traditional instruction.

Prior to the study both groups (constructivist and traditional groups) showed homogeneity regarding their GPA scores (Control = 2.93; Experimental = 3.07). Although the curriculum was implemented with 144 students, a total of 125 learners were available during the retention test. Therefore, the data we analyzed for the achievement test and the retention test was restricted with those 125 students.

There were two instructors involved in the study: the first author and a volunteer teacher with eleven and eight years of teaching experience in higher education respectively. Each teacher taught one control and one experimental group to avoid implementer bias. Both experimental groups were observed throughout four weeks and four sessions (two

hours out of for hours per week) were video-recorded to validate the social constructivist curriculum implementation.

Data collection Instrument

In this study a sixty-item multiple-choice test on classroom management was used as a pre-test, post-test and a retention test after a three-month summer vacation. The items were constructed by the help of four professors specialized in Curriculum and Instruction, and few were adapted from Woolfolk's (2001) Educational Psychology textbook. The items (N=62) were constructed based on the content of the course material that the students studied. The content validity of the test was verified through the judgment of a subject-area professor. The first draft of the instrument was pilot tested with a group of 35 students who took Classroom Management Course the year before, and used the same course materials. While the students were pilot tested, they were asked to put a note alongside an item that was not clear to them, or that they found irrelevant to what they covered in class.

Next, an item analysis was run. The item analysis showed that two of the items were too difficult (below .1) and two were too easy (above .9). The alpha reliability value of the test was .83. Those items that were too difficult (n=2) were revised and two of them were deleted. Finally, the revised items were subjected to expert judgment again (three subject-matter education professors). The revised version of the test consisted of 60 items in total.

Treatment

The experimental groups were exposed to social constructivist environment in which dialogue, collaboration, research, peer teaching, peer evaluation, authentic, and mainly problem solving tasks were emphasized for eleven weeks (four class hours per week). The activities and tasks during the process were mostly based on the seven dimensions of constructivist environment stated by Tenenbaum et al. (2001). The dimensions are dialogue, conceptual conflicts, sharing of ideas, reflection, meeting student needs, and authenticity. In addition to these dimensions, peer teaching, self and peer evaluation, and portfolio activities were included. Most of the active learning activities required higher order thinking.

In a particular social constructivist session, the students would come to class having read their course materials in the reading pack provided. The students in small groups were offered an authentic case that included some classroom management problems that needed to be solved. The students worked in groups and tried to discover the problems, find ways how those problems could have been avoided, and what could be done to solve the problem with reference to research and literature they read. Those social interactions were mostly means to reflecting back to students' own experiences, and to the theory and research they read about the subject. Next, group reports were shared with the entire group, and the theory and research read were means to whole group discussions from a socio-cultural perspective.

Figure 1 illustrates a description of the dynamics in social constructivist environment and their outcomes. As it can be seen in the figure, learning is an ongoing process fostered by previous knowledge and reflections on new learning. Collaboration was

used as a means to reflecting on every individual's perceptions about the problems, relate these to the cultural context, and find solutions that are adaptable to the cultural environment. Collaboration was not an "ends" in itself rather it was "means" to new learning.

Field notes and data analysis of the video-recordings reveal that in the first two weeks the students in the experimental group had difficulty in adopting themselves to the social constructivist environment. They frequently expected their teachers to provide them with the right answers. However, in the following weeks, they started to question the theory and research they read and tried to come up with solutions to the problems provided from a social cultural perspective. The implementers, too, felt under pressure the first two weeks in order not to impose their own dispositions about classroom management pedagogy when they were asked for the right answer. They frequently used statements such as "there is no absolute truth in this matter, we should find the best solution that fits us by synthesizing our past experiences and present experiences, and what literature and research says." As such, the social constructivist implementation conducted in the experimental group was reliable.

*****Figure 1: Dynamics in Social Constructivist Environment and Outcomes**

ABOUT HERE***

As regards to implementers' roles, the researchers' philosophy was to model as a constructivist teacher who both coaches or scaffolds and collaborates in problem solving activities. In other words, the notion that requires teacher educators to "do what they preach" (Holt-Reynolds, 2000; Jadallah, 1996; Kroll & Laboskey, 1996) was used

in the instructional as well as the classroom management approach. Literature reveals that constructivist environments require the students to take responsibility in decision-making, and taking ownership of learning (Brooks & Brooks, 1993; Shunk, 1996). Therefore, the students in the experimental group indicated their needs and interests related to the course in a mind mapping task. As such, lesson planning was based on student needs and interest.

The traditional instruction in the control group was mostly utilized through lecturing, recitations, and whole group discussion. Learners were assigned tasks that were occasionally means to whole group discussions. Rarely, group-work or pair-work were done. Those were traditional in nature as they were means to compare and contrast the individual work accomplished.

Data Collection and Analysis

The researchers hypothesized that the students in the experimental group (subjected to social constructivist environments were significantly more successful than the students in the control group (subjected to traditional instruction). With that respect an independent samples t-test was conducted to evaluate whether there was a relationship between the instruction used and student achievement and retention. We used group as a factor that indicated the experimental group and the control group. Our dependent variables were retention and achievement in classroom management course.

Results

Prior to the implementation pre-test results showed that there was no significant mean difference in learner scores between the experimental ($M = 3.356$, $SD = .549$) and the

control groups ($M = 3.293$, $SD = .726$) [$t(92) = .478$, $\rho = .634$]. Table 1 reveals the total scores learners obtained in the pretest.

*****Table 1. Comparison of Pre-test Scores of Experimental and Control Groups
ABOUT HERE*****

Table 2 reveals the data analysis results obtained from the post-test data [$t(123) = 1.63$, $\rho = .106$]. Although there is a slight mean difference in the total mean scores of the achievement test in favour of the learners exposed to constructivist learner environments ($M = 4.153$, $SD = .401$), in comparison to the control group ($M = .4037$, $SD = .391$), the difference is not significant. This indicates that student achievement did not differ with respect to the learning environment they were exposed to as measured by a multiple-choice-test.

*****Table 2. Comparison of Post-test Achievement of Experimental and Control
Groups ABOUT HERE *****

Consequently, we accept the null hypothesis (a) that indicates that there is no significant difference between experimental and control groups' achievement scores. The next analysis was based on the retention test results (Table 3). The retention test scores were compared by an independent t -test and the findings reveal a significant mean difference in favor of the experimental group [$t(123) = 2.61$, $\rho = .010$; ($M = 38.5$, $SD = 3.90$)]. Such finding was also reached by Yildirim et al. (2000) at lower levels of schooling, which

implies that learning in a constructivist environment may be more advantageous in the long run.

*****Table 3: Comparison of Retention Mean Scores of Experimental and Control Groups *****

As a result, based on the findings of this study, we refute the null hypothesis that indicates that there is no significant difference between experimental and control groups' retention scores.

Conclusions and Discussion

In this study the researchers found that there were no significant mean differences in the post-test scores of learners subjected to social constructivist environment and traditional instruction. However, a significant finding was that the retention of knowledge was more effective when learners were exposed to social constructivist environments in comparison with traditional instruction, which is also supported in other research studies (Yildirim et al., 2001). Such finding is important to show that when learners are subjected to traditional instruction, the knowledge they receive lasts for a short-term. In this study, the subjects in the control group either memorized or learned concepts and principles or theories for the purpose of passing the test or obtain a grade that indicates enhancement of the goals in a particular course. We may assume that learning occurred more for extrinsic reasons. On the contrary, when learners are subjected to social constructivist, the instructional environment becomes a powerful tool in the retention of knowledge of concepts and principles or comprehension of these with regard to classroom management theory. This implies that learning in the social constructivist

environment does not occur solely for achievement outcomes, but rather for long-term learning purposes.

Despite achievement tests have certain merits like generalizability opportunities, they have been criticized on the grounds that they measure knowledge from a narrow perspective (Astin, 1993). Therefore, a limitation is that utilizing a criterion-based test may have contradicted with the nature of constructivist epistemology itself and there is the risk that learning outcomes measured may not reflect the actual performance or knowledge construction of learners who were subjected to social constructivist learning, especially, with regard to measuring higher levels of learning. The purpose of the achievement test was primarily intended to measure students' final levels of achievement in the curriculum (Gronlund & Linn, 1990). When the results are compared with other research results, a critical question emerges regarding whether learning outcomes may differ with regard to measuring higher order thinking skills using a different evaluation instrument. Since long-term learning is essential for teacher education, this study showed that creating social constructivist environments may be a powerful tool to reach such purpose. Yet, we suggest that other research should shed more light into research and practice by using alternative assessment tools to understand the impact of the learning environment on the construction and retention of knowledge in the higher levels of the cognitive domain in teacher education.

Overall, the findings of this study are important in our efforts to improve student learning and assessment, particularly in pre-service teacher education and higher education. Doubtless, it is not an easy task to change the dispositions of learners and educators who are used to traditional ways of instruction. If the purpose of education is

to provide learners with long-term learning skills, this study shows that application of social constructivist environments in higher education may be effective in the retention of knowledge.

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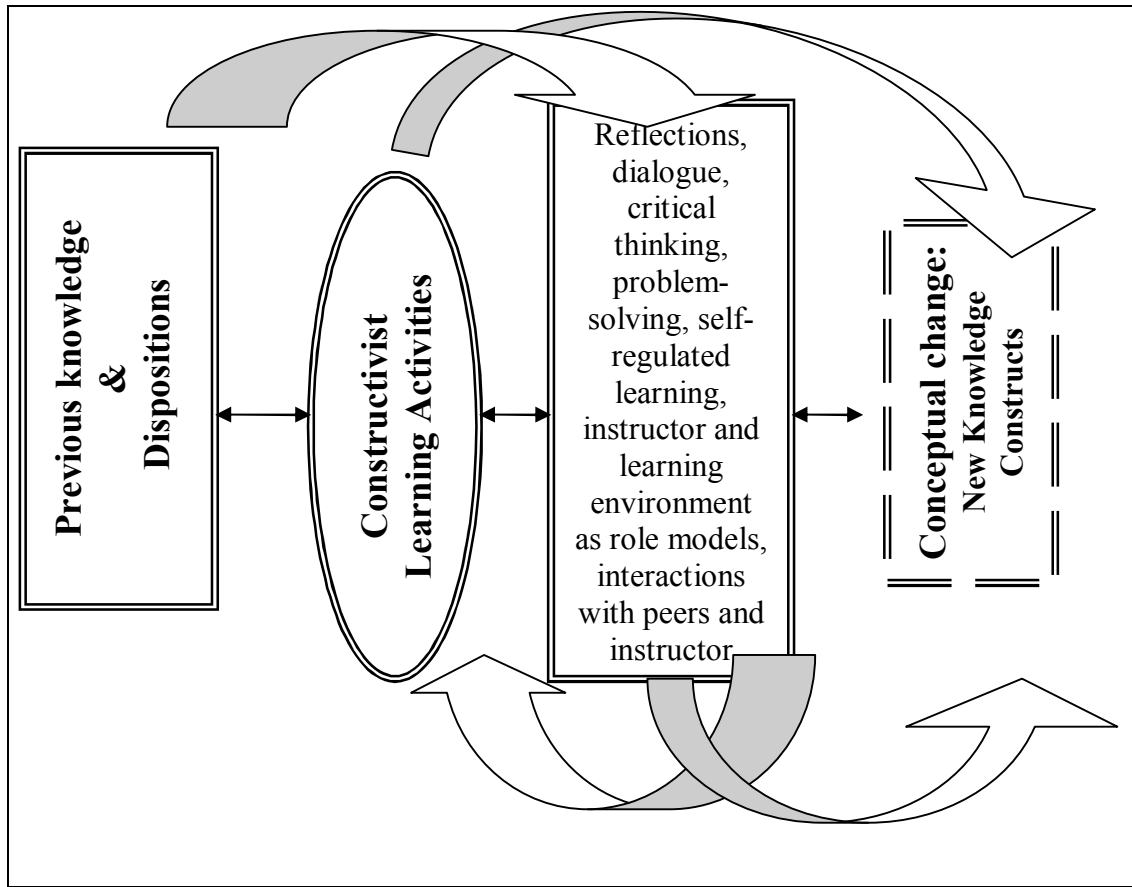


Figure 1: Dynamics in Social Constructivist Environment and Outcomes

Table 1

Comparison of Pre-test Scores of Experimental and Control Groups

Group	N	<i>M</i>	<i>SD</i>	t value	df	ρ
Experimental	52	3.356	.549			
				.478	92	.634
Control	42	3.293	.726			

Table 2

Comparison of Post-test Achievement of Experimental and Control Groups

Group	N	<i>M</i>	<i>SD</i>	t value	df	ρ
Experimental	66	4.153	.401	.478	92	.634
Control	59	4.037	.391			

Table 3

Comparison of Retention Mean Scores of Experimental and Control Groups

Group	N	<i>M</i>	<i>SD</i>	t value	df	2- tail prob.
Experimental	66	38.500	3.904	2.611	123	.010
Control	59	36.339	5.400			