Fostering creativity through online creative collaborative group projects

Fostering
creativity
through online
group projects

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Maria Rowena D.R. Raymundo
*Faculty of Education, University of the Philippines Open University,
Los Baños, Philippines*

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Abstract

Purpose – Higher education institutions (HEIs) frequently overlook the importance of encouraging creative thinking in students. A review of the prevailing practices in a fully online tertiary distance education (DE) institution revealed a lack of learning activities that foster creativity. The study aims to find out whether the creative collaborative group project is a feasible, effective and acceptable learning activity for fostering creativity in students of a fully online graduate-level DE course.

Design/methodology/approach – Seven groups of five to six graduate students each had five weeks to conceptualize, prepare and deliver a creative collaborative group project on lifelong learning using key concepts learned from the course.

Findings – All groups submitted well-crafted creative projects within the given time frame. Reflections on their experience positively correlated with known outcomes associated with creative skills. Students valued the experience and had a better understanding of the concepts. These support the feasibility, effectiveness and acceptability of the project for fostering creativity in a fully online DE institution.

Research limitations/implications – The feasibility, effectiveness and acceptability may vary in different contexts; future iterations in the same and/or other courses are recommended.

Practical implications – The creative collaborative group project is a feasible, effective and acceptable strategy for fostering creativity in online distance education.

Social implications – Creativity can be enhanced through appropriate online collaborative learning activities.

Originality/value – The study adds to the body of literature on the use of creative collaborative group projects to foster creativity in HEIs.

Keywords Creativity, Creative teaching, Creative learning, Distance education

Paper type Research paper

Introduction

Creativity is commonly described as the capacity to create objects or ideas that are novel and effective (Runco and Jaeger, 2012). It is valued highly across many disciplines and has been identified by educational institutions as an extremely important competency (Creely and Henriksen, 2019). Creative skills are in demand in the workforce and are considered essential for both personal and professional success. According to LinkedIn, an American online business and employment-oriented service, creativity tops the list of skills that companies need the most (Petrone, 2019). It is given priority in job recruitment processes because of the crucial role that innovation plays in business (Wesley *et al.*, 2017).

Higher education institutions (HEIs) should therefore prepare their students for integration into the work force by equipping them with the theory and skills that are

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aligned with current employers' demands (Collet *et al.*, 2015). While many employers are satisfied with the technical abilities of the students, they express the need to develop soft skills such as creativity (Mareque *et al.*, 2019).

However, the importance of encouraging creative thinking in students has frequently been overlooked. Since the view of many current educational systems is dominated by academic ability, creativity is not valued as much as literacy is (Robinson, 2006). In educational contexts that are heavily reliant on curriculum controls, very limited opportunities are available for students to exercise their creative capacity. There is not much motivation for teachers and learners to develop a creative mind-set, and few incentives are given for manifesting creativity in educational institutions (Cremin, 2015).

The purpose of this exploratory study is to investigate whether the creative collaborative group project is a feasible, effective and acceptable learning activity for fostering the development of creative skills in a graduate course offered by a HEI through distance learning. It intends to achieve this through the qualitative phenomenological approach of understanding the experience of graduate students participating in a creative collaborative group project in a master's level course of a fully online distance education (DE) institution.

Background

The University of the Philippines Open University (UPOU) was established in 1995 as an open university and DE institution within the structure of the national university, the University of the Philippines System. As a state university, UPOU provides quality education to individuals seeking to obtain a higher education degree or improved qualifications, but who cannot do so through traditional methods of education. Though it initially employed a print-based mode of delivery using stand-alone modules along with occasional face-to-face sessions, UPOU subsequently shifted in 2012 to a completely online mode of delivery characterized by the use of various Web technologies (Arinto, 2013).

The digital era and globalization in the twenty-first (21st) century underscore the need for HEIs such as the UPOU to re-evaluate their pedagogical practices and use of resources and align them in ways that will improve the quality and effectivity of the learning process. Currently students need to be equipped with 21st century skills, which will enable them to seek new information from various sources, translate this information into knowledge that can be applied and communicate this knowledge in different forms and circumstances, as well as solve problems creatively while collaborating with others (Scott, 2015).

In 2017, Bonito and Orias conducted a review of the most common learning activities designed around Web-based resources in UPOU. Their study revealed that the most common learning activities in many courses offered at the UPOU were "reading/ viewing/ answering study questions," discussion forum participation and writing critical analyses—activities, which provide students with limited opportunities to exercise creativity in using and constructing shared content (Bonito and Orias, 2017). These observations are consistent with findings in other studies that despite efforts to encourage creative education in many Asian counties, there has been little discourse on the pedagogical strategies to cultivate creativity or the creative qualities that these strategies need to develop (Choe, 2006; Cheng, 2011; Lin, 2011). Moreover, much of the academic literature on creativity along with the research approaches, theories and insights as to how this can be enhanced has also been based on Western methods (Choe, 2006). There is a gap in the literature on how to develop and enhance creativity in everyday practice in the Asian context, as well as its compatibility with local educational values (Lin, 2014).

With the aim of addressing the dearth of teaching and learning activities in UPOU, which are aimed at developing the creative capacity of students, the author looked into possible courses where an innovative approach could be introduced. The course selected was the

three-unit elective on Lifelong Learning (Course Code: EDDE 211), which is offered to students in the Master of Distance Education (MDE) program. The existing design of this course included three faculty-marked assignments in addition to required module readings and discussion forums. In the three iterations of this Lifelong Learning course from 2013 onward, the learning activities in the faculty-marked assignments have revolved around the following activities: (1) a critical reflection essay, (2) a written report on needs assessment in connection with lifelong learning in one's institution or organization and (3) a research proposal on an aspect of lifelong learning relevant to the student, to be presented in a seminar. While these learning activities provided opportunities for facilitating the development of critical thinking and communication skills, there were limited opportunities for the students to exercise and develop their creativity.

Upon receiving the assignment to handle the course in 2017, the author explored the possibility of innovating the teaching and learning process by introducing the "creative collaborative group project" *in lieu* of one of the existing requirements.

The study addresses the lack of opportunities to exercise and develop creative skills in UPOU courses through the introduction of an innovative learning activity. The findings will benefit students by way of enhancing the learning experience, as well as various stakeholders in the workplace and industry in terms of improved creative skills in current or future members of the workforce.

Research questions

The goal of the study is to explore the use of the creative collaborative group project as a learning activity to foster creativity in a course in a HEI. On the basis of this research goal and the review of related literature, the following research questions were developed to guide the investigation:

- (1) How feasible is the creative collaborative group project as a learning activity for fostering creativity in a master's level course offered by a state university through a fully online distance learning mode?
- (2) How effective is the creative collaborative group project as a learning activity for fostering creativity in a master's level course offered by a state university through a fully online distance learning mode?
- (3) How acceptable is the creative collaborative group project to the students as a learning activity for fostering creativity in a master's level course offered by a state university through a fully online distance learning mode?

Literature review

Review of related literature

Creativity is the ability to come up with novel and significant ideas using a wide variety of techniques as well as develop, fine-tune, scrutinize and assess these ideas to improve on them. It is the capacity to see mistakes positively as an opportunity to learn, with the realization that innovation and creativity involve going through cycles of small successes and frequent failures and implementing creative ideas to come up with concrete and useful contributions to the field (National Education Association, 2012, p. 25).

According to Runco and Jaeger (2012), the standard definition of creativity must include two elements: *originality* and *effectiveness*. In this regard, they favor the following definition given by Stein (Stein, as cited in Runco *et al.*, 2012):

The creative work is a novel work that is accepted as tenable or useful or satisfying by a group in some point in time . . . By "novel" I mean that the creative product did not exist previously in precisely the same form . . . The extent to which a work is novel depends on the extent to which it deviates from

the traditional or the status quo. This may well depend on the nature of the problem that is attacked, the fund of knowledge or experience that exists in the field at the time, and the characteristics of the creative individual and those of the individuals with whom he [or she] is communicating. . .”

[Runco \(1996\)](#) upholds the assertion of Stein that social judgment is involved since creative work is inclined to be of use for certain groups and that a creative insight may result from putting together already existing knowledge or materials in manner that results in the reconstructed version containing novel elements.

Creativity may be expressed as either eminent or everyday creativity. Eminent creativity is manifested by highly creative individuals who produce a tangible high-level output such as a work of art, invention or performance. Everyday creativity is nonformal and more personal; although the potential of an everyday creative may not result in a tangible product, it can still be original and effective for that particular individual. This creative capacity is used to deal with issues encountered in our daily lives ([Runco, 2009](#)).

Creativity may also be conveyed in various ways within and across domains, including education. Education is considered to be a means of preparation for one's career as well as individual success and development. For this reason, different sectors of society continuously conduct research on learning dispositions, skills and abilities that have been associated with success.

Prior to the Internet age, the focus of educators had been on preparing students for acquiring content and knowledge through literacy and numeracy skills, believing that mastery of these would be enough for success. However, in the current knowledge society, although cognitive skills such as literacy and numeracy skills are still considered to be necessary and relevant, these are no longer enough to ensure success. Society is transforming radically as a result of technologies that are changing the way people behave, interact with others and process information ([Bruno and Canina, 2019](#)). Since these digital technologies are now accessible to most people, there are increased opportunities for people to engage in creative activities ([Literat and Glaveanu, 2018](#)).

Individuals should now be equipped with certain skills, competencies and learning dispositions that will allow them to effectively participate in the current complex and rapidly changing digital society. Twenty-first century skills such as innovative design skills and creative spirit in the work force are highly valued. This underscores the importance of fostering creative capacity in HEIs, whose students are or will be part of the work force. According to Gardner (2007, as cited in [NEA, 2012](#), p. 24), the kind of education needed to develop a creative mind is one that encourages students to explore and solve challenging problems, as well as tolerates or even encourages productive mistakes. [Robinson \(2006\)](#) avers that one must be prepared to be wrong in order to come up with something original. Failure lies at the core of the creative process; it is at this point that the learner recognizes that a novel idea or design has fallen short of the expected outcome and should thus be improved upon ([Creely et al., 2019](#)).

Unfortunately, many of the current educational systems view intelligence as being dominated by academic ability; thus, creativity is not valued in education as much as literacy is. Since a premium is placed on getting things right, mistakes are stigmatized, and students work hard at trying to avoid making them. However, for one to be creative, one must be prepared to be wrong in order to come up with something original; the end result is that the school system “educates people out of their creative capacities” and by the time people reach adulthood, many individuals have lost their creative capacity ([Robinson, 2006](#)). HEIs should address this problem by finding ways to foster creativity in students. This is possible even in DE institutions using an online delivery platform. According to [Holz \(2017\)](#), the online learning environment is a good venue for facilitating the development of creativity by approaching it as a two-step process: generating creative ideas by exploring and investigating new knowledge and then applying these in novel and varied contexts.

Learning activities in an online educational institution may be done individually or as a group. Group projects have long been used as supplementary activities to improve cognitive learning among learners in a face-to-face setting. They provide practical experience, allow students to apply concepts learned as well as teach the students creative construction and group dynamics. Many teachers believe that effective communication is vital to the success of project teams (Hoegl and Gemuenden, 2001). However, they also believe that it is much more difficult to communicate when the students cannot meet in person. Thus, the prevailing belief is that group projects and teamwork are more difficult to carry out properly if the participants are geographically dispersed and not able to meet face to face (Whatley *et al.*, 2001). It may be for this reason that group projects are not often used in online education courses (Ekblaw, 2017).

At first, it may seem that group projects involving online collaboration may be done with little difficulty due to advances in technology. On the contrary, however, online collaboration can be quite challenging for students due to differences in schedules, work paces and time zones; different computer platforms and applications; security of file sharing; and no opportunities for face-to-face meetings. Therefore, it is important for teachers to be aware of these when planning online collaboration projects (Whatley *et al.*, 2001).

Theoretical framework

The theoretical framework that underpins the study is anchored on constructivism, a theory of learning that asserts that people learn by constructing their own understanding and knowledge of the world as they go through and reflect on different experiences. In the process of assimilating and accommodating new information, learners build upon the foundation of what they previously know in order to construct new and modified knowledge. Since meaningful connections are made through questioning, assessing and exploring, learning is an active rather than a passive process (Bada, 2015). Inasmuch as learners construct their own meaning of the real world from their personal experience, with their own mental models continuously evolving to reflect the new information that they acquire, they create their own interpretation of reality, which need not correspond to real-world reality (Driscoll, 2000 as cited in Bada, 2015). This implies that a single learning activity may result in varied learning experiences for each student since each individual is processing it within different personal contexts.

Social constructivism, a branch of constructivism developed by Lev Vygotsky, posits that while knowledge is individually constructed through one's experiences, learning is a social and collaborative undertaking where people construct meaning in the course of their interactions with each another. In the context of a learning environment, the social interaction and collaboration between different students who each have their own experience of the learning activity result in various perspectives on the course content as well as multiple representations of reality (Schreiber and Valle, 2013).

Vygotsky's concept of the zone of proximal development (ZPD) may help in the understanding of constructivist teaching approaches. The ZPD is defined as "the distance between the *actual* developmental level as determined by independent problem solving and the level of *potential* development as determined through problem-solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Simply put, it is an acknowledgment that students can learn skills and concepts that they cannot master on their own with the help of more knowledgeable persons such as the teacher or more advanced peers and that it is through working in collaborative activities with these more experienced persons that a student can best learn and internalize new concepts and skills (Shabani *et al.*, 2010). Thus, the role of the constructivist teacher is not to passively transmit knowledge, but to advise, guide and facilitate learning by creating an environment that encourages the

construction of knowledge through collaboration, social interaction and participation. This provides authentic learning experiences where students are active participants in their own learning (Schreiber and Valle, 2013).

Conceptual framework

The conceptual framework of the study is based on Lin's creative pedagogy framework (Lin, 2011), which is informed by two propositions that underpin the creative approach to education: (1) that creativity can be developed through certain strategies (Lin, 2011) and (2) that the potential to be creative is present in everyone (NACCCE, 1999).

The creative pedagogy framework consists of three elements: (1) creative teaching and (2) teaching for creativity, which are two distinctive views of enhancing creativity through teaching (NACCCE, 1999); and (3) creative and active learning (see Figure 1).

Teaching creatively (creative teaching) refers to "using imaginative approaches to make learning more interesting, exciting and effective" (NACCCE, 1999); the focus is on the teaching practice. However, although this is an important factor in teaching well, it does not ensure that the students are developing their own creative abilities. According to Lin (2014), this practice has a supportive ethos for nurturing creativity by way of the teacher's creativity and enthusiasm.

Teaching for creativity refers to employing teaching strategies that can develop the creative skills of the students (NACCCE, 1999); the focus is on learner agency, that is, the learning is derived from the action and initiative of the student. This addresses the development of the student's creative abilities. The supportive ethos in this practice is established when the teacher creates a learning context that encourages creative contributions from the students (Lin, 2014).

Creative learning is stimulated when students learn spontaneously by actively and creatively engaging with their environment through activities such as inquiring, experimenting, searching, manipulating and the like, rather than passively accepting knowledge from authority in the form of teachers or books (Torrance, 1970). It is an important element in the creative pedagogy framework because neglecting spontaneous creative learning and learner autonomy leads to difficulties in cultivating creativity in children (Lin, 2011).

Figure 1.
The conceptual
framework of the study
based on Lin's creative
pedagogy framework
(Lin, 2011)

These three elements are interconnected and interact with each other in a dynamic teaching and learning process to facilitate everyday creativity ([Lin, 2014](#)).

Framework for creative learning outcomes

The framework for evaluating the learning outcomes for creativity is based on the 21st century student outcomes of the P21 framework, a model for integrating 21st century skills into the teaching of key academic subjects. This framework was first created in 2006 and is updated continuously, the most recent being in 2015 ([Demystifying learning frameworks, 2016](#)). Although the P21 framework was originally intended for use in the basic and secondary levels of education, it is still applicable in other education levels as a general guide for desired outcomes in terms of skills and competencies.

The theoretical basis for the P21 framework is that students should be given the appropriate opportunities and means to acquire the skills that they will need for work and careers in the current world.

A skill is an ability, proficiency or capacity to do something that is learned, developed or acquired through training and experience. Competencies include not only skills but also the knowledge, abilities and behaviors that are fundamental to the use of those skills. The P21 framework articulates the combination of content knowledge, specific skills, literacies, expertise and competencies that students need to develop and master in order to succeed in work, life and citizenship. Creativity is one of the learning and innovation skills in the P21 framework, and the elements described as “21st century student outcomes” (represented by the rainbow) are the knowledge, skills and expertise students should master to succeed in work and life in the 21st century. These specific learning outcomes for creativity used in the P21 framework will be employed to determine the presence of creative skills in the participants’ self-expressed written reflections ([P21 Framework Definitions, 2009](#)).

Research design and methodology

Research design

The study has a qualitative research design with the ontological philosophical assumption that there are multiple realities about the experience or phenomenon of being a participant in a creative collaborative group project. Specifically, it is a phenomenological research that looks into and understands how the study participants who experience the said phenomenon view their own individual experiences ([Creswell and Poth, 2007](#)).

The research worldview is based on social constructivism, where the individual participant tries to understand the world he/she lives in and comes up with subjective meanings of their experiences. Therefore, the aim of the research is to look into one’s views on the situation of being a participant in a creative collaborative group project. Since this is an initial exploratory study without any precedent, the students were instructed to write their reflections and insights about their experience of participating in the creative collaborative group project. The question is broad, general and open-ended so that the participants have the freedom to construct meaning from their lived experience.

Research setting

The study was conducted from January 6, 2018 to March 17, 2018 during the second trimester of the academic year 2017–2018 at the UPOU. The course was a ten-week master’s level elective course on Lifelong Learning (Course Code: EDDE 211), which was designed to introduce graduate students to the theories, principles, approaches and perspectives that underpin lifelong learning. Course materials consisted of 11 resource-based course modules

on various topics on lifelong learning. Course activities consisted of three discussion forums aligned with the modules and two faculty-marked assignments, the first of which was an individual critical reflection essay. The learning activity to be investigated – that is, the creative collaborative group project – is the second of the faculty-marked assignments.

All course materials and activities were delivered fully online through the UPOU's open-source Moodle-based virtual learning environment.

Research participants

The study participants were graduate students from the UPOU MDE program who were enrolled in the course on Lifelong Learning (EDDE 211) during the period wherein the research was conducted.

Research methodology

Thirty-eight graduate students enrolled in the course on Lifelong Learning (EDDE 211) were divided into seven groups consisting of five to six students each. The groupings were assigned by alphabetical rotation, while topic assignments based on the course modules were drawn from a pool of numbers. Each group was given five (5) weeks starting from the fifth week of the term to conceptualize, prepare and deliver a creative project presenting key points and important concepts in lifelong learning.

A creative project was defined as “any original creative effort, including writing (poetry, short story, essay, play), art (painting, drawing, collage, photography), music (songs and compositions), and mixed media (video, performance art)”. It could also refer to a way of presenting important concepts and key points of the topic covered by the specified modules in any manner other than the usual straightforward written report. These creative ways may include, but are not limited to, presentations, collages, infographics, posters, wikis or blogs, websites, videos, film and songs.

All group projects were shared with the rest of the class through the course site. Members of the class were invited to view and comment on and react to the creative output of each group.

A rubric for assessment was used in the course, with performance indicators being creativity/choice and use of tools and techniques for chosen format; content; quality of sources and citation; organization; adherence to submission deadline; and overall work and effort. A peer evaluation form that included meaningful contribution to group discussions, completion of assigned work on time, preparation of work in a quality manner, demonstration of a cooperative and supportive attitude and significant contribution to the success of the project as evaluation criteria was also used by the study participants. However, an analysis of the assessment and the peer evaluation forms was beyond the scope of the study and were used only as part of the institutional requirements for the course.

Data gathering

Students gave feedback on the group experience in the form of an essay in answer to the instruction for them to write their reflections about their experience of participating in the creative collaborative group project.

Data analysis

The data was analyzed using a descriptive approach, that is, the participant's description of the experience is processed as meaning-laden statements related to the phenomenon of interest – in this case, the experience of being part of the creative collaborative group project – in order to understand the most essential meaning of participation from the perspective of those who

directly participated in it (Giorgi, 1997). Data analysis was done by reading the reflections and comments of the participants, noting of the emergent themes and searching for connections and patterns across the themes. The first cycle coding methods used were a combination of *descriptive* coding (wherein the topic of what the participant said is summarized into a word or phrase) and *in vivo* coding (which codes actual terms and phrases used by the study participants) (Saldaña, 2009). Pattern coding, where the initial codes are analyzed and grouped into a smaller number of themes, was used as the second cycle coding method (Saldaña, 2009). All coding methods were done manually by the study author. Emergent themes were correlated with the outcomes ascribed to creative skills and competencies in the P21 framework to analyze the effectiveness of the activity in fostering creative skills.

Ethical issues

An informed consent was obtained from all the study participants. All procedures in the study were in accordance with national ethical standards.

Results and discussion

Demographics

The ages of the study participants ranged from 21 to 54 years. Eighteen participants (47.4%) belonged to the 30–39 age group, twelve (31.6%) to the 21–29 age group, seven (18.4%) to the 40–49 age group and one (2.6%) to the 50–59 age group. The majority of the study participants were based in the Philippines (31/37), while seven were offshore students based in five other countries (i.e. three in China, one each in Singapore, Saudi Arabia, Germany and Indonesia). All of the study participants were employed at the time of the study, and all but one were Filipino.

Feasibility, acceptability and effectiveness

The objectives of the study were to look into the feasibility, effectiveness and acceptability of the creative collaborative group project as a learning activity for fostering creativity in a master's level course offered fully online DE institution.

Feasibility. Feasibility is defined as the capability of an intervention to be carried out or implemented. Thus, if the groups were capable of successfully carrying out and completing the creative collaborative project that they had worked on within the given time frame, then such a learning activity can be considered feasible.

The findings revealed that all seven groups were able to complete and submit their projects by the given deadline. The resulting creative output of the seven groups was diverse; it included two websites, two videos, a wiki, a Webquest module and a PowerPoint presentation (see Table 1).

All seven groups were able to turn in creative projects, which met or even exceeded the standards set by the course within the allotted time of five weeks, despite all of the students being employed and some students being based offshore in different countries and different time zones

All groups submitted well-crafted and well-executed creative projects in various formats. Each demonstrated skillful to masterful choice and/or inventive use of tools and techniques consistent with the creative format they had selected. The projects were able to convey important key points and concepts in the assigned module, were organized and easy to understand. The materials used were derived from scholarly and reliable sources, with appropriate attribution. An exemplar of the creative output of the class is shown in Figure 2, together with a link to the actual creative collaborative group project, which was shared by the group in the public domain (see Figure 3).

These findings support the feasibility of the creative collaborative group project as a learning activity to facilitate creative output in a master’s level course offered by a HEI through a fully online distance learning mode.

Effectiveness. Effectiveness is defined as the capability of an intervention to produce the desired result or outcome. The study can be seen as examining two aspects of effectiveness of the creative collaborative group project activity: (1) effectiveness in coming up with an output that can truly be considered as “creative” and (2) effectiveness in fostering creative skills in the students.

With regard to the first aspect, [Savage and Fautley \(2007\)](#) believe that creativity can be explained in terms of four characteristics:

- (1) it involves thinking or behaving imaginatively;
- (2) the imaginative activity is purposeful and is focused at achieving an objective;
- (3) the process gives rise to something original or novel;
- (4) the result or outcome is of value in relation to the objective.

All four characteristics are evident in the projects delivered by students. The projects were a product of their collective imaginative thinking and behavior; the activity was purposeful and resulted in a tangible creative outputs; the creative outputs were considered original and

Table 1.
Types of creative
collaborative project
output

Group	Topic	Creative output
1	Continuing professional education	Wiki
2	Lifelong learning in developing countries	Website
3	Vocational education	Website
4	Universities and lifelong learning	Webquest module
5	Community education	PowerPoint presentation
6	Technology and lifelong learning	Video
7	Adult education	Video

Figure 2.
The P21 framework for
21st century learning
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Source(s): ‘Lifelong Learning in Developing Countries’ website (2019)

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Figure 3.
An example of a
website creative output
of graduate students
enrolled in a UPOU
Lifelong Learning
course (Wiki)

novel, since all of them utilized platforms and formats that differed from the usual written essays, reports and proposals submitted as course requirements, and the creative outputs were of value not only to the group but also to the rest of the class and the general public, in the cases of those who chose to share it in the public domain. Hence, these projects are considered to be creative output.

As regards the second aspect, effectiveness in fostering creative skills in the study participants was analyzed by correlating the themes generated from the study participants’ reflections with P21 outcomes for creativity and innovation skills. The findings showed that the themes that emerged from the reflections and insights of the participants were closely correlated to and aligned with the 21st century student outcomes ascribed to creativity in the P21 framework.

Examples of actual statements from the reflections of the students are written across the relevant expanded learning outcome for each of the four skills under the creativity and innovation skill set, to illustrate the correlation between them in [Table 2](#).

These findings support the effectiveness of the creative collaborative group project as a learning activity to facilitate creative capacity and development of creative skills in a master’s level course offered by a fully online DE institution.

Acceptability. Acceptability refers to “how well an intervention will be received by the target population” ([Ayala and Elder, 2011](#), p. 69). Because of the broadness and the multifactorial nature of acceptability, it will be useful to look into the other emergent themes from the study participants’ reflections.

Theme: initial apprehensions. Findings revealed that several study participants had initial apprehensions about the learning activity. Many expressed initial misgivings about having a task that required them to collaborate with others in a group. Others cited their apprehension about coming up with a creative project and being at a loss as to how to approach it. The

Table 2.
Correlation of students’
reflections with P21
framework student
outcomes for creativity
and innovation skills

21st century student outcomes for creativity and innovation	Reflections of study participants
<i>Think creatively</i>	
(1) Use a wide range of idea creation techniques (such as brainstorming)	“Everyone pitched their ideas until we all agreed that it was going to be a website”
(2) Create new and worthwhile ideas	“We learned something new . . . how to use Wix to design a website, understanding .png, and creating a comic using Pixton”
(3) Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts	“We threw our thoughts first in Hangouts. Then in the evenings – we did telecon via Hangouts. During our initial discussion, it dawned on us that we have enough skill sets among the three of us to go and do a documentary”
<i>Work creatively with others</i>	
(1) Develop, implement and communicate new ideas to others effectively	“The more experienced group members guided the newer ones especially with creative tools to be used. When we learned about these tools, our work became a bit easier and we concentrated more on our task and how to create a presentation for it”
(2) Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work	“We all have creative minds and distinct preferences so we initially had opposing plans yet it helped in creating a much holistic idea for our output”
(3) Demonstrate originality and inventiveness in work and understand the real-world limits to adopting new ideas	“When one member found the TESDA (Technical Education and Skills Development Authority) directory, we all agreed to scrap the beginning . . . we were all clueless as to what project to create”
(4) View failure as an opportunity to learn; understand that creativity and innovation are a long-term, cyclical process of small successes and frequent mistakes	“We brainstormed for ideas; came up with one; worked on it; discovered that the first idea would just be a duplication of an already available website; scrapped what we worked on; came up with another plan; made our individual contributions; put together our outputs; created our website by taking turns and putting whatever we could contribute; and finally, finished our output. It was a process enabled by combined efforts from everybody”

reasons they cited for misgivings included the physical and geographical separation, different work responsibilities and schedules.

However, all of those who expressed initial apprehensions said that these were diminished once the group started working on the project and they actually realized that they could make it work. Many of them cited the supportive, cooperative and responsible attitudes of their group mates as well as good communication, division of tasks and adhering to the timetable as being instrumental in allaying their fears (see [Table 3](#)).

Theme: fully-online DE mode. The study participants also raised issues related to the fully online nature of the learning activity. One participant cited the advantage of being able to reflect on her responses before sending it to a group mate whom she did not get along with, as opposed to the immediate responses had they been in a face-to-face mode. Others mentioned the importance of efficient communication, commitment, time management and information and communication technology tools in bridging the distance between time and space in DE.

Theme: positive overall experience. The overall experience of most of the study participants was positive. The reflections expressed feelings of enjoyment at doing the project and learning new things, as well as gratitude for the experience and new friends gained. Some found the experience very pleasant and meaningful, while others said it

Table 3.
Reflections expressing
initial apprehensions

Reflections of study participants

“At first, we were hesitant on how we are going to translate the lesson into something creative and interactive . . . but the essence of teamwork and active participation remained from the planning to actual design and development of our creative project”

“At first, I’m wondering how we are going to do it, but everything turned out very enjoyable and (it was a) satisfying learning experience. I’m open now to thinking outside the box”

“At first I was apprehensive about this project. Being new to UPOU, I did not expect that group projects are present (and feasible) in distance learning. The entire DE group work experience was a breeze, probably because I was fortunate to have really cooperative group members”

“At first I thought it would be really hard—we are separated physically, have different kinds of jobs, and have different work schedules, etc. It was not easy, but I am so proud we made it work”

was rewarding. One participant emphasized the pride she felt for their group project. Another participant who was on her first term in a DE course said that she found it “very ideal for DE students.” Although there were participants who had negative feelings about certain group mates, none of the study participants had expressed a dislike for the project itself.

In analyzing the aforementioned reflections on initial apprehensions, it is apparent that a number of misgivings stemmed from the fact that they were DE students separated in time and space, with each having personal and work obligations in addition to the academic responsibilities. This is consistent with evidence from the literature on the prevailing belief is that group projects and teamwork may be more difficult to carry out properly if the participants are geographically dispersed and not able to meet face to face ([Whatley et al., 2001](#)).

This initial apprehension was allayed once the group started working on the project and the participants realized that the task was doable. Eventually, the study participants shared that they valued the experience of engaging with the group project. The students also appreciated the discussions that they had in the course of planning the group project, as well as the sharing of insights and perspectives. They believed that these discussions enabled them to have a better understanding of the concepts, and because of this, they were able to engage more readily with the course material. These are consistent with the principles of social constructivism, which stresses the importance of collaboration with others and underscores the value of social interaction as a means by which individuals can construct new meanings from shared experiences. In spite of the distance and the fact that they were geographically apart from each other, the study participants maximized different avenues for communication. The use of applications such as Facebook Messenger, Google Hangouts, Google Documents and similar platforms made it possible to work as a group through chat sessions and video conferencing.

According to the participants, the creative collaborative experience underscored the importance of shared workload, cooperation and mutual support. The project became more manageable since it was broken down into smaller tasks, which were handled more easily by the individual members who each had assigned roles. They highlighted the importance of cooperation, initiative, commitment, foresight, being proactive, a positive attitude, patience, understanding, empathy, motivation and encouragement from group mates and mutual respect.

Time management and adherence to the stipulated timelines were other important factors that contributed to the success or failure of the members of the group to execute a task in the way it was originally planned. When one member was delayed in accomplishing a certain task, the rest of the group mates and the overall project itself would be affected. This

realization kept the members on track because they did not want to be responsible for any delay in the submission of the project.

The creative collaborative group project also incorporated the key elements of authentic learning practice, which include real-world relevance; an ill-defined problem; complex and sustained investigation, multiple sources and perspectives; collaboration, reflection (metacognition); interdisciplinary perspective; integrated assessment; finished products and multiple interpretations and outcomes (Lombardi, 2007).

On the other hand, the students also experienced challenges in the creative collaborative group project experience. These included instances where the student was not able to attend to other personal and professional responsibilities, creative differences between group members and clash of personalities.

Overall, the students believed that the creative collaborative group project was a positive experience for them, not only because they acquired new knowledge and information related to the course, but also in terms of acquiring competencies and skills that they could use in other courses and in their everyday life. Because of this, they look forward to having a similar activity in their other courses in the future.

These findings support the acceptability of the creative collaborative group project as a learning activity to facilitate creative output in a master's level course in a fully online DE institution from the perspective of the study participants.

Conclusion

The objective of this exploratory study was to find out whether it was feasible, effective and acceptable to use the creative collaborative group project as a learning activity for fostering creativity in a master's level course offered in a fully online DE mode.

The fact that all seven groups were able to turn in high-quality creative projects that satisfied or even exceeded the standards set by the course and were able to do so on time supports its feasibility.

The effectiveness of the creative collaborative group project may be seen from the quality of the output itself, as well as the reflections of the study participants. As mentioned, the participants turned in projects worthy of being considered "creative." The reflections of the study participants, when mapped or correlated against the 21st century student outcomes for creativity based on the P21 framework, show an almost exact direct correlation or alignment with the said outcomes, supporting the effectivity of the learning activity in fostering the development or enhancement of creative skills.

The positive overall experience of the study participants as seen in their description of the activities as a pleasant, enjoyable, meaningful and rewarding experience, together with the absence of negative feedback about working on the group project, also indicates that it is an acceptable learning activity.

These findings support the feasibility, effectiveness and acceptability of the creative collaborative group project as a learning activity for fostering creativity in a master's level course offered by a state university through a fully online distance learning mode.

The research study has the following limitations: it involves a specific cohort of graduate-level students, all of whom belong to a specific program of study (i.e. the MDE program) in UPOU, the national university. The nature of the discipline, the program, the type of students accepted in the program and the institution may be factors that could influence the student's perception of their learning experience. The fact that all except one of the study participants are Filipino may also be a factor in terms of certain cultural traits that may influence group dynamics and interaction. The course was also offered at a fully online DE mode at well-established distance learning institution. Because of these limitations, the results of this study cannot be generalized to all populations.

The findings of the study can inform the instructional design of graduate-level courses in the future by paving the way for fresh and innovative options for learning activities, which would foster the development of creative skills and enable learners to benefit from an improved learning experience. It will also benefit various stakeholders in the workplace and industry, in terms of improved creative competencies of learners who are either current or future members of the workforce.

Recommendations for future research are as follows:

- (1) Explore the use of the creative collaborative group project in other contexts (i.e. different courses, programs and institutions).
- (2) Investigate the feasibility, effectiveness and acceptability of collaborative group projects in fostering other 21st century skills and competencies.
- (3) Explore the use of other new and innovative learning activities to develop 21st century skills for courses delivered in the fully online DE mode, notwithstanding existing prevailing preconceived notions.

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Corresponding author

Maria Rowena D.R. Raymundo can be contacted at: mariarowena.raymundo@upou.edu.ph

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