



## STIMULATING DIGITAL LITERACY PARTICIPATIONS' FRAMEWORKS: INNOVATIVE AND COLLABORATIVE LANGUAGE PROJECTS

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### Abstract:

This paper highlights educators' innovativeness as digital participants and facilitators adapting themselves in current global educational changes as upshots of technological fusion that influences instructional variation for learners' real-world. It is perceived that teachers' flexibility to evolving trends in current instructions is crucial. It is fundamentally a structured expository concept on teachers and students' development reinforced by theories and researches' investigated outcomes toward the challenges of emerging pedagogic phenomena sustained by model project- tasks designed for innovative, collaborative and digital literacy participations. This inquisition attempts to respond to the succeeding inquiries: Why do educators innovate in the 21st century? Is professional development necessary to situate contemporary learning? What are the roles of technology and digital literacy for innovative and collaborative instructions? What are the features of digital literacy and digital participations and how do participants pragmatically engage? What are some collaborative and innovative projects that define digital participations? Are these tasks sustained by current and duly sanctioned educational principles and frameworks? Do these tasks conform to the scope of integrated digital literacy taxonomy framework? Do the framework and principles produce practical assessment of outcomes to improve future project-based tasks? An empirical investigation is recommended to test the significance and correlation among students' project performance towards their attitudes and efficacy on digital literacy.

**Keywords:** digital literacy participation frameworks, innovation and collaboration, project-based tasks, digital taxonomy, integrated digital literacy taxonomy, technology and education

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## 1. Introduction

Resourceful teachers' exposures to changes brought about by time define "instructional rebirth." we call this phenomenon as a form of 'renaissance' as a result of modifications being observed, experienced and implemented in education as upshots of technological emergence. Many writers attest to this perception. (Pope & Golub, 1999) offered broad standards and instructions in technology assimilation among educators to begin with new instructive experience. To them, the advent of new things that proliferates around learners' environment is a wakeup call for further discoveries that may heighten educational practices. (Myers, 1996; Wilhelm, 2000 & Gilster, 1997) welcome the fruition of new knowledge brought about by the spread of computers and other forms of technology. They cogitate that adapting to these changes will generate favorable differences among learners. For instance, (Hawisher & Selfe, 1991) have sanctioned the current potential of computer technology in written expositions. They claim that modern writing can be enhanced by the presence of computers due to easy manipulation directed by variety of applications built in them. However, with the presence of other forms of technology as time moves; there are other knowledge and skills that are essential to be assimilated for operative instructions. To attain transformative directions amidst overwhelming blending of technology in pedagogy, educators need to acquire skills and knowledge to digitally participate. Acquiring them reveals that technology can define real "passionate educators" in a universally changing society.

Consequently, the constant advent of technology yields varied instruction modifications from traditional to contemporary styles. It yields multimedia-rich environment which is believed to possess the capability to develop shared meanings (Kishi, 2008) when it is employed in educational contexts. The use of technology leads teachers to situate learning styles and teaching techniques. Additionally, technology generates the fruition of varied multimedia forms that manifest the presence and relevance of Information Communication and Technology (ICT). This type of flourishing contemporary environment is perceived to enable teachers' creativity when they design language tasks in acclimatizing modern-day learners called as "digital generation" (McLoughlin & Lee, 2007). In some instances, the use of these innovated tasks from modern-day materials could influence lessons to underpin institutionally-prescribed curricular goals. As instructional designers, teachers' involvement to technologically-associated materials is naturally confronted with educational principles that they have to address and conform sensibly during the creation of didactically useful tasks from opted springboards. However, teachers should only involve technologies when necessity arises in generating outcomes (Zeurcher, 2002). With the help of technology, innovation is perceived to spawn pedagogical implications that tend to benefit both learners and teachers in materials selection, tasks designs, presentation and performance as digital participants (DLs) who have the active abilities in interacting with forms of technology and media (Hague & Payton, 2010).

## 2.1 Questions

To fully explicate the theme of this study, the subsequent questions were prioritized: Why do educators innovate in the 21st century? Is professional development necessary to situate contemporary learning? What are the roles of technology and digital literacy for innovative and collaborative instructions? What are the features of digital literacy and digital participations and how do participants pragmatically engage? What are some collaborative and innovative projects that define digital participations? Are these tasks sustained by current and duly sanctioned educational principles and frameworks? Do these tasks conform to the scope of integrated digital literacy taxonomy framework? Do the framework and principles produce practical assessment of outcomes to improve future project-based tasks? An empirical investigation is recommended to test the significance and correlation among students' project performance towards their attitudes and efficacy on digital literacy.

## 2.2 Research's foundation

This research emerged due to an empirical investigation conducted by (Sørensen & Levinsen, 2015) on digital practices in the classroom, who articulated that digital technology offers an extensive variety of selections for increasing appraisal in digital learning processes. Their study asserts that digital participants comprising students and teachers were able to employ shared networks and cloud technology which produced innovative self-motivated structures for facilitators' work enabling assessment and learners' peer evaluation. They suggested that production of digital activities could enhance the examination and evaluation of outcomes and sustain digital participations in the classrooms through modification of technological skills and awareness of the contemporary effective teaching practices. Involvement of digital participation practices and the relevance of assessment for effective teaching have been mentioned in their research which this current study alludes to.

To establish proximal linkages and relevance on the stated inquisition's recommendations to researchers within this paper, we introduce and propose innovative and collaborative digital tasks whose processes and outcomes could be evaluated through Integrated Digital Literacy Taxonomy Framework (IDLTF) of (McMahon, 2014) and the values of Digital Taxonomy (DT) by (Churches, 2008) where order thinking skills (OTS) which are Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS) are embedded not to mention how self-and peer evaluation are administered after the performance of outcomes from (Lachs, 2000) and the production of an evaluative measure on how teachers reflect their instructions to enhance students' projects aside from emphasizing collaboration and creativity through the manipulation of digital technologies. Other frameworks to evaluate teachers' participations that influence project-based accomplishments in instructions include: concepts of (Partnership for 21st Century Skills, 2010) and (Richards's, 2000) questions that demonstrate what teachers should basically consider to implement technology, the suggestions of (Berger, 2003; Smith & Wilhelm, 2002) on how technology should serve

instructions and teachers' self- evaluation formulated out of the proposed-project based- tasks.

### 2.3 Abbreviations for readers

These abbreviations are relevant in understanding the core of this paper due to their constant repetitions in this study.

- Digital Literacy (DL)
- Digital Participation (DPn)
- Digital Participant (DP)
- Digital Taxonomy (DT)
- Lower Order Thinking Skills (LOTS)
- Order Thinking Skills (OTS)
- Integrated Digital Literacy Taxonomy Framework (IDLTF)
- Digital participations (DPns)
- Digital Participants (DPs)
- Revised Bloom's Taxonomy (RBT)
- Higher Other Thinking Skills (HOTS)
- Learning Management Systems (LMS)

### 3. Review of related literature

The influx of technology in education upsurges educational evolution in the 21st century. Thus, educators are being transformed as digitally literate in their engrossment to educational technologies to operate and facilitate. The emphases of this review are essential to the writers' research approaches in expounding the theme of digital literacy participations resulting to innovative and collaborative project facilitations, specifically in language instructions. Furthermore, this section sustains questions raised largely on project-based tasks' performance, examples being analyzed and other provided claims deemed necessary to the foci of this study.

#### 3.1 Technology and education

In language teaching, (Sulaiman, Sulaiman & Suan, 2011) articulate that instructional technologies have affected instructional methodologies which produce students' experiences different from traditional modes. This concept establishes consistency on the use of technology by (Presby, 2001; Burns, 2002) who expounded that learning such as online learning enables students to work as a team in transferring knowledge to every member in a group. To them, this mode of learning stimulates passive individuals' interests to be involved favorably in interactive deliberations. The concept brought about by the cited authors links to technologically collaborative projects. Furthermore, (Young, 2001) reveals that technology change instructional techniques to fundamentally align to students' needs, objectives and instructional situations. Young articulates that to be able to use technology's educational benefits, educators must cultivate and strengthen sensible perception of technology within themselves. Similarly, (Domalewska, 2014; Motteram, 2013) claim that technology allows teachers to reflect on their recent practices. Technology at this point is understood to support the practices of newly conceptualized classroom activities, teaching adjustments' application, ingenuity and instructional development. To (Hague & Williamson, 2009), the process of

integrating technology across the curriculum demands teachers' responsibilities. They reveal that integrating knowledge of digital technology with the expansion of subject knowledge is likely to require altered pedagogical techniques as well as the growth of different knowledge, outlooks and skillsets in teachers. (Johnson & Johnson, 2009) disclose that technology produces cooperative learning for students' project engagement. This type of learning commands teachers to organize supportive activities that trigger groups' interactive experiences among members to enable well-deliberated projects.

(Young, 2001) explains that present educators attain awareness of technological functions and to recognize its capability to educate by three notable procedures:

- Awareness of the complexities of technology assimilation to learning and its central role in the discipline being taught.
- Ascertaining and realizing the constantly developing outcomes of ICTs on knowledge acquisition.
- Discovering the implication of constructing important situations for operative technology incorporation by framing an instructions that generate evaluative questions, formulation of work-based criteria, application of approaches alongside technology incorporation, pondering on the results of immersion and reexamining these approaches constantly.

### **3.2 Technological transformations affecting education in the 21<sup>st</sup> century**

(Partnership for 21st Century Skills, 2007) articulates that among the core subjects for 21<sup>st</sup> century, English, reading or language arts are included in realizing century skills such as learning, innovation, information, media and technology skills among others. To connect these cited core subjects to these paper's theses, the writers perceived them as among the fundamental subjects where technology could be dominantly incorporated. (Sulaiman, et. al 2011) express that transforming the present educational system entails changing the culture and practice which stimulate thinking, creativity, cater to individual abilities and learning styles grounded on more justifiable access. Even in the late quarter of the 20th century, scholars were aware that educational settings were being altered by time and that educators faced challenges to cope with educational renovations due to the inception of technology. To (Schön, 1983), practitioners allowed themselves to experience perplexity in situations which they found distinctive. They pondered on the changes that took place around them and anticipated what may occur next to build prior understandings of which they could create judgements to demonstrate instructive adaptation. (Greenwald, 2013) supposes that today, the added focus is on interactive study- one that requires the use of the target language and the application of the standards through technologically-related tools. Also, (Sulaiman, et.al 2011) divulge that the onset of educational technology offers variations in teaching practices. In English Language, this support is believed to be beneficial for students through the introduction of varied activities aided by their presence. To make teaching effective, teachers have to create possible changes on their current lessons. They continued that in transforming present instructional practices,

teachers should consider modifying their prevailing lessons attuning to available technological tools. This principle is equally vital to what (Bhatt, 2012) proposes that DL is achieved through technology where teaching practices have to be equal to communal practices in any learning institution. In his investigation, he contends to the notion that knowledge must adhere to situations wherein students are supported to attain digital knowledge and skills through engagement to activities that require them to incorporate technology.

### **3.3 Professional development in the 21<sup>st</sup> century**

(Partnership for 21st Century Skills, 2007) contends that to enable students to attain current century skills, it is claimed that teachers should possess major roles towards the attainment of educational transformation to situate learning in current real-world to be manifested by students' well-performed outputs. This happens when teachers are equipped with knowledge of the standards, assessments, curriculum and instruction, learning situations and the value of professional development. (Trilling & Fadel, 2009) advocate and propose effective professional development programs' standards that should be inculcated by educational organizations to their educators:

- Monitoring teachers' needs and immersion to current-trend for effective tasks constructions.
- Employment and supervision, appraisal of learning tasks and related projects.
- Teachers' observation to the skills, approaches of other teachers, evidence-based researches associated and addressed to teachers' personal questions.
- Tackling pedagogical issues, cooperative learning that are based from holistic experience and proficiency of other teachers and establishing connections to other academic society.
- Connection of teachers' own job and to the programs that they follow.
- Sustainability and depth achievement through the provision of demonstration, training and coaching.
- Cooperative problem solving among other teachers and integration of other features that define educational renovation.

(Bybee & Starkweather, 2006) reveal that contemporary professional development needs to focus on how to use technology to accomplish goals and discover measures to teach standards-based lesson infused with technology. (Kaplan, 1991) shares that teachers' educational viewpoints should be associated with their knowledge of technology. Concept developed by teachers could materialize when they are equipped with enough awareness of technological tools that they may manipulate as they integrate their viable teaching perceptions. (Oates, 1989) asserts that majority of teachers imparts ideas where computers are perceived to have dominant favorable effects on the efficiency and composition in language instructions. One major way to elucidate this idea is the incorporation of technology in macro skills' development. Additionally, (Keifer, 1991; Young, 2001) express that appropriate technology has the potential to empower teachers and is relevant to educational transformation when treated as a crucial learning factor. Though technology may not be the ultimate solution

for quality education, there are beneficial contributions by which they are manipulated for the efficient facilitation of instructive practices such as in language teaching. It adds to creative ideas which teachers are able to bring in the classrooms over traditional methods of teaching.

(Partnership for 21st Century Skills, 2007) reveals that if the objective of the 21<sup>st</sup> century is to empower students in knowledge and skills, it is relevant that educators themselves are empowered on the same awareness. Teachers are expected to master the competencies that ensure favorable intended results for their students. Students may fail to master 21st century skills without the support of teachers who are well trained and supported. 21st century professional development opportunities prepare educators to integrate 21st century skills into learning standards and updated classroom instructions. Acquired awareness from professional development knowledge when unshared and unapplied appears superficial. According to (Walsh & Gamage, 2003), one among the novel methods to professional development is work-embedded learning. This sanctions educators to impart instructional familiarities with colleagues, allude particular work awareness, replicate or design through original concepts, deliver favorable practices and attempt the effectiveness of newly introduced curricula where design and revising activities may materialize.

### **3.3.1 The relevance of growth mindset**

Above all, it is believed that successful professional development thrives from teachers themselves by naturally building a growth mentality over a fixed mindset. Teachers' possession of fixed mindset impedes total professional growth. When educators are highly accommodating in acquiring more awareness of new ideas for pedagogical advancement, they are educators who possess growth mindset which learners critically need. Educators who welcome constantly the emergence of new knowledge unto themselves open doors to marvelous opportunities for learners.

### **3.4 The rationale of digital literacy and digital participants**

Technology related- professional development immersions of teachers produce DL which they can apply in variety of activities. Many definitions emerged about DL which are timely interesting to ponder. (Ofcom, 2009) articulates that it is the ability to manipulate, comprehend and produce digital media and interactions. (Hague, & Payton, 2010) define DL as the functional skills required to operate and communicate with technology and media. (Prensky, 2008) imparts that DL is procedural literacy which is tantamount to the ability of manipulating technology in whatever ways to cater to one's learning needs and teaching aims. To (Hague & Payton, 2010), DL comprises skills, familiarity and comprehension regarding technologies that sustain critical, imaginative, perceptive and harmless practices when digital participants (DPs) are endowed with digital technologies in all aspects of life. DPs are teachers and learners themselves. (Hague & Payton, 2010) continues that developing DL does not simply require the acquisition of skills in using ICTs, but development of one's knowledge about technology and media; application of these tools and resources to

subjects and understanding of their roles alongside multimedia for the treatment of materials in the real-world. To (Rheingold, 2012), the idea of DL may comprise commencing concepts such as critical information attention, standardized cooperative inquiries, integrated cooperative building of familiarity and acquaintance to manipulate technological forms. (Ilomäki, 2014) imparts that DL means the awareness of information and aptitudes established by diverse digital media with a multifaceted philosophy of viewpoints. Ilomäki further associates DL's notions on teachers' manipulation of digital tools in different ways inspiring innovative digital writing and endorsing instructive individuality. Moreover, (LINCS 2015) simply describes DL as an initial conglomeration of rudimentary digital skills needed to operate digital devices such as keyboarding; using a mouse, touchpad, clicking, pressing. These skills may comprise knowledge to create, save, locate, edit among other computer applications connected to Internet engagement. It further highlights that DL possesses language terminologies that are concomitant with how technology and multimedia are activated for specific purposes. However, there are some points apart from technology that are to be weighed and considered when DL is practiced. For example, according to (McKee-Waddell, 2015) DL understanding is when teachers are aware of plagiarism avoidance and respect to copyright laws while being innovative. These should be inculcated in technology-related activities such as digital writing. Equally important, proponents reveal that digital participation (DPn) focuses on what is to be learned. (Kajder, 2003) shares that in language teaching, participations focus on how learning could be achieved with the aid of technology rather than learning about technology corresponding to (Willis, Stephens & Matthew, 1996) who articulate that DL is an approach that situates technology knowledge behind prioritizing learning principles to produce intended learning outcomes. Furthermore, (Farren & Crotty, 2013) reveal that teaching concepts such as identification, labelling and narratives must be taught and teachers themselves for DL confidence.

In summary, three common attributes of (Lonsdale & McCurry's, 2004) standpoints are highly regarded: (1) DL is a knowledge with social accountability which means that DPs are accountable to what they disseminate and in the management of sources, (2) DL comprises learner-centered literacies that involve a diverse range of skills and understanding and (3) DL generates dominant roles of critical thinking skills.

### **3.5 Digital literacy and digital participations' outcomes for 21st century teaching**

The advent of technology in educational settings yield numerous changes that have taken place and that are currently taking place. These changes convey the emergence of DL where teachers and students as participants are involved to. (Sulaiman, et.al 2011) convey that nowadays, instructional technology particularly the use of computer, software, and Internet applications has become so widespread in schools and that their functions have expanded intensely of which many teachers now think about their implications on instructional practices. (Tang & Chaw, 2016) reveal that blended learning atmosphere could be created through using DL components and knowledge acquisition processes. Their study reveals that students' today need to be digitally



knowledgeable to appropriately manipulate technological tools which are functional in tasks performance. They advise that learners must be efficient and focused in developing their DL. They further pointed out that there is a difference between competence of the tools and the knowledge of the tools and that such confusion between both have to be resolved. To create operative DPns, knowledge and competence have to be infused in instructive practices. (Evans, 2004) declares that young generation of today has an increasing digital cultures while technology emerges culturally. (Hague & Payton, 2010) state further that DPns can be manifested by manipulating digital technologies to interconnect and produce messages in varied media forms to be shared in diverse opted formats.

As consequences of changing phenomena, (Partnership for 21st Century Skills, 2010) connects DL for teachers' instructions through the following concepts:

- Content and instruction must be aligned with educational technology.
- Support instruction with 21<sup>st</sup> century principles that attach to awareness and skills,
- Stabilize direct instructions methodically with project-related instructional methods.
- Relate learners' behavioral growth, knowledge to teachers' groundwork and teaching programs.
- Apply a wide-variety of evaluation methods strategies in determining students' performance and distinguish instruction not controlled to formative, portfolio-based, curriculum-embedded and summative.
- Active involvement in learning societies; recommending the proficiency of others within or outside the learning institution through " coaching, mentoring, knowledge-sharing and team teaching,"
- Perform as consultants and peer coaches with colleagues.
- Apply variety of methods to cater students' levels and to build an atmosphere which advocate distinguished instructions.
- Constant professional improvement based from practiced principles.

### **3.6 The digital literates' participations in instructions**

But technology can't just be instantly decided, we need to evaluate the types of technology that we are to implement prior to students' learning engagement. This occurs as early as selection of materials, design of materials and presentations of lessons out of chosen materials. The following statements manifest the principles of using technology adapted from (Richards's, 2000) questions that indicate what a teacher should basically consider to implement technology pedagogically:

- Employment of technology should develop communication in the classroom.
- Technology should authenticate classroom assignments.
- Technology should corroborate learners' knowledge.
- Technology should be significant to teachers and learners' time and performances.

(Berger, 2003; Smith & Wilhelm, 2002) suggest how technology should serve instructions. These were modified by the writers in forms of questions for teachers to reflect upon.

- Do forms of technologies function to authenticate individual students' "real - world" applications?
- Do they complement and improve teaching?
- Do they connect nearly and clearly with content teaching?
- Do they enhance outdated varied types of media resources?
- Do they convey additional materials and create wider access to users?
- Do they increase students' ways of expression and increase their views to attain suggestive and real audiences?
- Do they expand students' comprehension of multifaceted concerns and improve their ability to interact globally?
- Do they underpin and improve the connotation and scopes of the 21<sup>st</sup> century literacy?

### **3.7 Materials selection, preparation, design and presentations of tasks through technology**

(Richards, 2000; Berger, 2003; Smith & Wilhelm, 2002) claim technology could sustain what modern educators should observe in materials selection and preparation, tasks designing and presentation as digital participants (DPs). Said claims of the scholars are expounded methodically.

#### **3.7.1 Materials selection**

In materials selection process, they manipulate forms of technology, multimedia and Internet applications. Moreover, they consider the availability of technological materials that may mediate when they present them for instructions. Teachers can exploit a piece of learning material offered by various media in several distinctive ways. Furthermore, processing them for teaching would in turn involve the manipulation of technologies from the time they have been selected, edited to be learner-centered until they are presented or even performed by students. At this point, the use of computers and Internet applications are most likely needed in building activities from potentially perceived- materials.

#### **3.7.2 Tasks Preparation and designing**

Teachers design their inputs inculcating relevant rudiments and components of task designs, adaptation or alignment to recent institutionally-mandated English language programs, integration of the domains of learning that prioritize cognitive, psycho-motor and affective goals; incorporation of educational technology tools and conceivable teaching approaches. Teachers using educational technologies should link to curriculum campaigns that endorse methods and strategies in exploring instructions (Thieman, 2016). The existence of these tasks elements with corresponding task-based pedagogic approaches in a technology-mediated environment can enhance ESL

learning (Hiradhar, 2015). Likewise, DPs as designers have to anticipate that whatever is demonstrated in class must generate learning directions and that it should endeavor to closely relate to the curricula's general objectives and specific objectives (Griffin, 2015). These learning objectives should be aligned to assessment and the construction of instructional strategies, making them crucial factors which reinforce one another (Teaching Excellence & Educational Innovation, 2008). All these professed principles may be aided by suitable instructional technologies for active DPns of teachers and learners.

Since inputs require the incorporation of educational technology tools such as computers, multimedia and Internet Applications, teachers are expected to possess surplus knowledge of the tools (Elbelazi, 2015) just as how students basically need. (Moeller & Reitzes, 2011) disclose that technology can offer significant teaching and learning tools. In order for technology to be extensively accepted as an educational instrument, it has to reveal wide-ranging and methodical strength. The timely idea of associating DT of objectives in the tasks is in proximity to the use of technology for said technological utilization establishes the critical need of modern OTS (Churches, 2008) through which obvious connections of integrated Computer Assisted Language Learning (CALL's) standards are applied because of the onset of multimedia and Website Applications (Warschauer & Healey, 1998). With regards to DT where order thinking skills are embedded, it builds modern foundation of students in acquiring higher order problem-solving aptitudes.

The kind of material employed as springboards may also indicate the type of educational technology tools that are to be operated. The activities may engage students into independent and collaborative learning or a combination of both (Pink, 2006). Correspondingly, even (Mayer, Heiser, & Lonn's 2001) theory can be applied in designing materials whereby modes of learning are focused when the cognitive theory of multi-media learning is used as reinforcement. This theory has seven principles that may be useful in designing materials: multimedia, spatial contiguity, temporal contiguity, coherence, modality, redundancy and individual differences. In conjunction to this, (Brame, 2015) unveils that one main concern when involving technology related-materials in the classroom is the integration of Cognitive Load Theory (CLT). This means that designers enable learners to be strongly attached to the tasks that are pertinent to learning instead of being mindful of the technological steps that only facilitate the production of learning outputs (Cooper, 1990).

### **3.7.3 Task presentation**

Materials that have been designed for students as DPs require appropriate technological tools. Therefore, teachers' knowledge of multimedia materials during lessons' demonstration forms a chief role in a 21<sup>st</sup> century classroom (Elbelazi, 2015). This is where collaborative and independent learning or both are utilized as anticipated during the creation of tasks. Tasks presentation leads to the emergence of outputs that reflect the attainment of objectives and the OTS which are significant in assessing or indicating the level performance of students.

To sum up, educators' DPns result to diverse features and scopes of strategies as to selection of materials, designs and presentations generating the significance of collaboration and innovation for students as Dps.

### **3.8 Roles of innovation / creativity and collaboration/cooperative learning**

(Pacific Policy Research Center, 2010) articulates that collaboration, innovation and speed are essential in today's creativities by technology incorporation. This explains that through technology, invention through activities as well as timely designs and tasks are easily completed with collaboration that can be initiated by innovation. Both could be attained through socio-cognition which expounds the idea that the presence of technological tools sanctions immediate and updated interchanges among participants.

#### **3.8.1 Innovation**

(Genc, 2016) reveals that all teachers are expected to advance their own capacity to strengthen education, mindset, theory and practice of learning or even modify to improve teaching skills. This is where creativity or innovation is being introduced. (Sulaiman, et. al 2011) proposes that in order to transform present instructional practices, teachers should consider modifying their existing lessons. Teachers should revise their instructional practices such as the use of textbooks to current practices. Correspondingly, (Lidawan, 2016) discloses that every educator must have the impulse to innovate by employing materials and tools brought about by the proliferation of media and technology to situate 21st century learners. Situating current learners by creating interactive activities from materials that exist around learners' environment is the most realistic adaptation educators can offer to new generation of learners associating the standpoint of (Kolawole, 2012) who discloses that it is imperative for modern-day language teachers to be resourceful if they are able to activate all the resources that are available to them to promote effective language teaching and learning. Innovation is tantamount to creativity and is often described as an essential skill that should be fostered (Wegerif & Dawes, 2004) in a review of the interconnection among technology, learning and creativity. Furthermore, (Loveless, 2002) reveals that technology allows individuals to produce high quality work in a range of media that provides opportunities for creativity. (Trilling & Fadel, 2009) disclose that developing creativity and innovation skills with technology isn't only for the prodigies, but can occur generally to educators who are guided by their teaching goals. To relate technology's functions to creativity, there are numerous techniques by which teachers can reinvent instructions to highly engross DPs. (Hague & Payton, 2010) articulates that digital technologies nowadays deliver an array of exciting prospects for young people to create their own digital media and online content artistically as DPs. Some students may have been exposed to creative technology activities before they are being introduced in the classrooms by their teachers.

Being creative consists of possessing original ideas through the use of individual's resourcefulness in establishing connections between known ideas and how new discoveries may emerge (Hague & Payton, 2010). (Trilling & Fadel, 2009) argue

that creativity can be nurtured by teachers and their learning environments as well as it encourages questioning, openness to new ideas and learning from mistakes and failures. Mistakes and failures can trigger innovation by reflecting on the causes and thinking of possible solutions to address them. Additionally, creativity and innovation skills can be developed when enough practice and time are observed (Wegerif & Dawes, 2004). Moreover, (Hague & Payton, 2010) elaborate that creativity combined with DL does not only involve being self-motivated in discovering media, but embraces generating it and comprehending what has been made; digital knowledge and creativity may reciprocate each other.

### **3.8.2 Collaboration**

(Hague & Payton, 2010) reveal that collaboration and DL learning involve dialogue, discussion and building on others' ideas to create shared understandings. In conjunction to this perception, students as DPs have to define and comprehend how collaboration is crucial to digital skills' application. The learners as participants should recognize that digital collaboration is sharing through available spaces. When DPs realized the importance of sharing, socially shared cognition is believed to have been attained. At this point, collaboration aided by technology is a form of modern social activity.

(Brown & Cole, 2000) states that socially shared cognition has a role in collaboration which simply explicates that students are contributors within a common group with a mutual goal and awareness among participants, artifacts, tools and social institutions where knowledge acquisition is taking place. Socially-shared cognition delineates and establishes collaboration since knowledge is conveyed by participants who simultaneously are learning. In here, both learners are experiencing common involvements and that knowledge acquisition is being allocated and circulated among them in an instructive group (Bell & Winn, 2000).

(Hague & Payton, 2010) shares that collaboration offers students specific roles for each member in a group through a common plan for project completion. It is through collaboration that objectives of performing assigned projects are attained. Accordingly, another way of supporting collaboration through DL is by computer-based learning environments that can function to stimulate group's effective process of inquiry (Laurillard, 2009).

In a collaborative task according to (Domalewska, 2014), technology-supported learning may appear as an inaccessible activity, but when turned into a collaborative task, differentiated type of learning may take place. Differentiated type of learning refers to the cooperative acquisition of knowledge which is not common to all learners due to settings where technology is involved. It is expected that when a socially-designed activity is presented, collaboration takes place and that learners unite their dominant concepts, ability and resourcefulness to arrive at intended results. (Domalewska, 2014) further divulges that collaboration in language learning to be socially shared should involve project-based activities associating social and meaningful situations which allow new incorporation of ideas to existing structures

where technological devices serve as tools in sustaining knowledge. In here, students conjoin to identify, examine and discover solutions to problems.

Furthermore, (Pacific Policy Research Center, 2010) imparts that ICT is transforming how we learn aside from emphasizing the value of collaboration on shared decision-making and information sharing. Similarly, (Partnership for 21st Century Learning, 2007) divulges that modern century allows communication and collaboration skills that can be achieved in varied approaches. Investigation on instructing communication and cooperative skills inspires direct and facilitated communication, involvement on cooperative projects and assessment of performance by learning outputs. To add, collaboration with others according to (Trilling & Fadel, 2009) demonstrate the ability to work harmoniously with diverse teams, exercise flexibility and willingness to be approachable in making essential negotiations to accomplish a mutual goal, assume shared accountability for collaborative work and value individual contributions. Moreover, (Brown, 2001) relates that integrating digital technologies in English language classroom allows individualization in large group, eases varied styles of practice, inspires teamwork and proliferates excitement.

### **3.9 The Integrative digital literacy taxonomy**

Both writers perceived that one way of assessing groups' target outputs in assigned projects is the employment of frameworks and existing principles. One of the principles used in this investigation is Integrative Digital Literacy Taxonomy (McMahon, 2014).

IDLTF is consists of five intertwined factors which are skills, levels, media, schema and contexts possible to employ in evaluating project-based activities in the classroom for DPs. The DPs are the learners who are expected to accomplish the projects and the teachers as designers of the tasks. This framework will be highly employed in the analyses of teachers and students' collaborative tasks as DPs in this inquiry.

#### **3.9.1 Skills**

Skills are psychomotor, cognitive, affective and may include social abilities. Psychomotor refers to the physical use of the tools. Cognitive is the capacity of digital participants to perform steps in processing modern forms of data or information such as non-linear contents. Affective may refer to the concept of individual distinctiveness and self-effectiveness and the capacity to manipulate technology for social purposes (Macmahon, 2014).

#### **3.9.2 Levels**

Levels are aligned to (Churches's, 2008) DT comprising the OTS: remembering, understanding, applying, analyzing, evaluating and creating manifested by their smaller units called as subskills demonstrated by DPs in the accomplishments of assigned projects. (Macmahon 2014) shares a few of these levels in his framework such as organizing, characterizing, applying, responding, generating and receiving that are found under DT's OTS.

### 3.9.3 Media

The media involved here may be traditional in nature such as text, audio and images, but modern media may enable contemporary forms such as animations, branching information styles that are familiar in Websites (Macmahon, 2014) and other social media forms such as tweeters, Facebook, LinkedIn, podcast, blogs, Learning Management Systems (LMS) among others.

### 3.9.4 Schema

Comprises factual, conceptual, procedural and metacognitive knowledge dimension from the Revised Bloom's Taxonomy (RBT) (Krathwohl, 2002) and may also involve tenets from Connectivism by which learners make connections with their world outside the classroom and that networking ability is developed enabling them to observe their own skills digitally and virtually (Siemens, 2004). This is associated with the (Chickering & Ehrmann's, 1996) principles on networking that perceives learning as a creation of connection or a network-construction procedure; purposively inspire engagement between teachers and students, mutuality and collaboration among students. Furthermore, they perceived that networking produces dynamic participatory learning, speedy responses and duration in the performance of tasks, connects high knowledge prospects and respects learners' individuality. Schema as one of the components of IDLTF is demonstrated in Table 1.

**Table 1:** Bases of schema in integrated digital literacy taxonomy

<b>Structure of the Knowledge Dimension of the Revised Taxonomy*</b>
<i>A. Factual Knowledge</i> – fundamental factors that students must recognize to be familiar with the area of learning or find solutions to problems in it.
A.1 Knowledge of terminology
A.2 Knowledge of specific details and elements
<i>B. Conceptual Knowledge</i> – The interconnections of the fundamental rudiments within a bigger structure that allows them to meaningfully operate together.
B1. Knowledge of classifications and categories
B2. Knowledge of principles and generalizations
B3. Knowledge of theories, models, and structures
<i>C. Procedural Knowledge</i> – How steps are performed; process of examination, and principles for manipulating skills, systems, techniques and approaches.
C1. Knowledge of subject-specific skills and algorithms
C2. Knowledge of subject-specific techniques and methods
C3. Knowledge of criteria for determining when to use appropriate procedures
<i>D. Metacognitive Knowledge</i> – Awareness of reasoning as a whole and knowledge of one's own understanding.
D1. Strategic knowledge
D2. Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge
D3. Self-knowledge

\*Adapted from (Krathwohl, 2002) with a few changes

Another component of IDLTF essential in DL is connectivism which states that decisions are based on rapidly altering foundations. New information is continually being acquired. The ability to draw distinctions between important and unimportant information is vital. The ability to recognize when new information alters the landscape based on decisions made previously is also critical. Table 2 shows the principles of connectivism as one schema or structure to define DL.

**Table 2: Principles of connectivism\***

1. Learning and knowledge rests in variety of viewpoints.
2. Learning is a procedure of linking specific data bases.
3. Learning may reside in non-human applications.
4. Concentrates on the ability to know more than what is presently understood.
5. Development and preservation of networks is crucial to enable constant knowledge.
6. Ability to observe the associations between discipline, thoughts, and perceptions is a fundamental proficiency.
7. Latest and precise knowledge is the concentration of connectivist knowledge tasks.
8. Decision-making is knowledge –acquisition procedure. Choices on what to acquire and the significance of arriving information is observed by unstable realism. The appropriate answers of inquiry today may be different tomorrow due to constant changes taking place in the information environment which influence sanctioned results.

\*Adapted from (Siemens, 2004) with a few changes

### 3.9.5 Contexts

Forms of technology are used in DL through situations such as critical, cultural, creative, communicative, constructive, confidence and civic. It is said to be cultural when the DPs adhere to social norms. Constructive if it is reforming, revising or mashing up present content and civic if technology is employed ethically and purposefully. Civic when self-assurance is displayed by DPs with effectiveness and flexibility to technological manipulation.

In summary, these components are presented in the IDLTF through Table 3 adapted by the writers in expounding the core principles of the project-based tasks.

**Table 3: Integrative digital literacy taxonomy framework\***

Framework's components				
Skill	Levels	Media	Schema	Contexts
Psychomotor Social Cognitive Affective	Organizing	Time	Metacognitive	Critical
	Characterizing	Images	Conceptual	Cultural
	Applying	Language	Procedural	Creative
	Generating	Network	Factual	Communicative
	Receiving	Agency	Connectivist	Constructive
	Responding	Audio		confidence
				Civic

\*Adapted from (McMahon, 2014)

Another existing principle that associates to DL and DPns in project-based tasks is the DT of (Churches, 2008).



### **3.10 The role of digital taxonomy in project-based tasks requiring technology**

DT is involved due to technology incorporation and that the activities infuse varied subskills that determine the intercessions of OTS in performance processes.

According to (McKay, Anderson & Krathwohl, 2001; Churches, 2008), the DT also included attention to “digital collaboration” that includes moderating, negotiating, debating, commenting, video conferencing, reviewing, questioning, commenting, posting, networking, contributing, chatting, e-mailing, twittering, texting and instant messaging, among others. DT challenges to generate some of the potentials that instructional technologies for aiding learners to think critically about the knowledge of technology and their purposes of employing technology. However, teachers should not deviate from the fact that there are suitable tasks for students to perform reading, writing, creating, communicating and collaborating without necessarily employing digital presentations.

To ponder on these academically sanctioned ideas presented by authors, it is professed that when technology is incorporated to projects for collaborative performance, the OTS are manipulated and interspersed in different levels due to students' involvement to the subskills present in each level. However, critical thinking through the OTS could be attained by learners in activities that may not necessarily require technologies. It is then the creative responsibilities of teachers as DPs to direct students to appropriate activities which technologies do not play major roles in the accomplishment of activities. Likewise, it is teachers' accountability to weigh and consider the crucial roles of technologies prior to presenting projects. One way of determining whether the tasks require technology or not is through identifying inputs' features to be employed in activities.

Equally important, (Ashrafi, 2013) highlights that behavioral objectives are primarily used for goal clarification, facilitation of instructions and evaluation. The concept brought out by the author in highlighting the behavioral objectives alludes to the purpose of associating digital taxonomy in project-based analysis. To reinforce favorable effects, the DT and the IDLTF by are essential tools in analyzing these proposed tasks not to mention the schema of knowledge that are obtained from (Anderson & Krathwohl 2001). These two principles elaborate critical thinking skills. (Lidawan, 2017) adds that to realize these modern changes, the DT as a contemporary taxonomy of the cognitive domain should begin focusing on situating learning in an environment that manipulates technological tools for the enhancement of teaching and learning processes. In here, Churches reformed the LOTS and the HOTS by adding digital verbs to the previously recognized subskills verbs from the RBT.

(Hague & Payton, 2010) explain the importance of critical thinking skills by expressing that some teachers feel that their own functional skills are not as developed as their students and therefore question their ability to teach DL. Even teachers know less than students on how to operate a particular piece of technology, they are still more equipped with the higher order critical thinking skills and the subject knowledge to apply to digital technologies. (Hague & Payton, 2010) further explicate critical thinking and DL by divulging that critical thinking and digitally literate students are not just

passively receiving information or meaning, but are also contributing, analyzing and shaping through critical thinking manifesting the crucial relevance of IDLTF.

### **3.11 Principles behind assessing outputs**

An outcome needs an assessment to maintain or improve, adjust and recreate instructions. This contains surveys on what other writers reveal about the value of assessment.

To reflect on outcomes, they have to be governed by assessment principles. (Scroggins, 2004) perceives students' results as being collated, imparted and used for the purpose of advancing both knowledge and the process of an organizational curriculum. Additionally, (Gensee & Upshur, 1996) holds on to the principle of relevantly determining details that influences learning performance individually or in groups to be able to organize and create suitable teaching procedures. Equally important, (Chastain, 1988) perceives that it is crucial for educators to regularly evaluate their instructions based on students' feedback, enthusiasm, groundwork, involvement, persistence and accomplishment. The inferences that teachers derive from these factors are their bases for gaging the efficiency and appropriateness of designed students' tasks.

Likewise, (Luckin, Bligh, Manches, Ainsworth, Crook, & Noss, 2012) articulate that assessment is a learning practice that when blended with technological constructions, it sturdily sustains the learning process. It further guides students to hone their ability in completing their tasks as their skills and knowledge progress. Moreover, (Hattie & Timperley, 2007) impart that regular assessment as an inclusive part of daily pedagogy is dominantly linked to interchange which leads to favorable effects on learners' ability to accomplish offered tasks. When activities are monitored regularly, teachers are able to recognize flaws through which improvement of instructions is addressed.

## **4. Discussion**

### **4.1 The proposed innovative project-based tasks for digital literacy and participations**

To ensure DPns, teachers are expected to reflect on their roles regarding technological emergence that systematically transforms instructions and on their technological skills regarding multimedia and other forms of educational technologies to adapt with teaching trends such as computer operation and Internet applications in obtaining materials that align to their teaching purposes. With enough knowledge preparation, they can participate digitally alongside students' prior knowledge that could be enhanced in project-involvement procedures. The following are proposed examples of advanced level collaborative projects for teachers and students' performances as DPs in English language instructions by way of restructuring real-world material:

- Musical scoring
- Subtitling
- Scripting

- **Remaking/Reshooting**

The material is a syntax or composition of information presented in a form of a silent film. From this original material, the DPs can further generate other collaborative activities and innovative concepts to present similar information while technological skills are functionally manipulated in language instructions (Richards, 2000; Berger, 2003; Smith & Wilhelm, 2002).

#### **4.2 Project-based digital tasks**

Research on project-based learning illustrates significant benefits for students who work collaboratively on learning activities in contrast to students who perform alone. An additional research finding was that students who have difficulties with traditional classroom, textbook, and lecture learning benefit significantly from a project-based learning experiences through the project's close alignment to their learning styles and preferences (Darling-Hammond, Barron, Pearson, Schoenfeld, Stage, Zimmerman, Cervetti & Tilson, 2008).

To (Thomas, Joseph, Laccetti, Mason, Mills, Perril, & Pullinger, 2007) best practices for project-based learning include: a) binding project outcomes to curriculum and goals, b) employing questions or posing questions to introduce students to vital concepts and principles, c) student responsibility for designing and managing much of their learning and d) basing projects on real-world problems. Additionally, (McMahon, 2014) articulates that different disciplines would have different expectations and demands on learners' DL which illustrate that in language activities, there could be varied outputs to be targeted and varied strategies to be applied. All these will rely on teachers' knowledge and skills as DPs.

#### **4.3 Facilitators' general tasks as digital participants in project-based tasks**

Employing IDLTF, RBT and DT principles, the following are the sequential tasks of teachers to facilitate digital participations.

1. Conceptualizing a strategy that involves language and technology manipulation
2. Searching for inputs that exist in a media-rich environment to suit the language lessons
3. Gathering possible suitable inputs.
4. Evaluating the inputs' complexities to cater to learners' levels.
5. Choosing an appropriate material among what were gathered.
6. Identifying the material chosen through its feature and genre.
7. Reflecting on the value which the input is capable of in the lesson.
8. Downloading the material.
9. Reevaluating the material's ability to lead the attainment of objectives.
10. Relating the tasks to curricular goals and objectives.
11. Editing content when necessary.
12. Formulating digitally- connected tasks out of the material.
13. Relating the intended tasks on the availability of classroom technology materials.
14. Reflecting on the necessity of technological tools in the task performance.

15. Inferring on its further instructional and cultural suitability.
16. Saving the material in an external disc or at any retrievable storage.
17. Recommending and presenting the material to students' for class viewing.
18. Facilitating issues and themes' discussions.
19. Confirming the specific issue that revolves around the material restricting to overview by reserving more in-depth ideas for the students' to discover.
20. Explaining the general and specific tasks' instructions.
21. Responding to students' clarifications.
22. Grouping the students to be involved with collaborative active roles.
23. Assigning individual group's specific task.
24. Uploading general and specific tasks' instructions.
25. Uploading the short silent film to group leaders' LMS accounts,
26. Providing students'' further reference through the film's URL.
27. Explaining the importance of disclaimers and acknowledgements.
28. Reviewing the groups' narratives to confirm their viability to the project.
29. Monitoring students' project- development onsite and online.
30. Imparting suggestions pertinent to the improvement of the projects.
31. Sharing suggestions to cater to students inquiries.
32. Uploading students' projects after review to confirm their utilization.
33. Facilitating in the projects' showcase to culminate the activities
34. Instructing students' further revisions if deemed necessary.
35. Assessing students' projects.
36. Instructing students to share their outputs in social media.
37. Suggesting students' self-evaluation for self-improvement.
38. Reflecting DL participations for the improvement of students as DPs.

#### **4.4 Student's general preliminary project-based task as digital participants**

(Mckee-Waddell, 2015) argues that teachers have to be taught in attuning changing technologies that shape modern writing known as digital composition believed to be more than basic writing that may enhance students' critical thinking, enable cooperative writing with fellow students aside from developing teachers' teaching styles.

Before the students deal with groups' specific assignments, they have to complete the preliminary task which is narrative construction. The narrative is relevant in the performance of project-based tasks' final output.

##### **4.4.1 The narrative constructions**

These activities will be preliminary completed when teachers have already grouped the students prior to assigning specific tasks. The concept is supported by some writers in behalf of the teachers and students as participants in a technology-related project preference. (Darling-Hammond, et. al 2008) support project-based tasks. (Richards, 2000; Sulaiman, et.al 2011; Berger, 2003; Smith & Wilhelm, 2002; Evans, 2004; Hague & Payton, 2010; Tang & Chaw, 2016) anchor pedagogical principles to teachers' knowledge of technology in materials selection, preparation, tasks design and

presentation. Similarly, (Chickering & Ehrmann, 1996) reveal the advantageous existence of networking. (Brown & Cole, 2000) advocate the significance of social sharing to complete the tasks. Furthermore, (Mckee-Waddell, 2015) supports digital writing though creativity and collaboration and (Macmahon, 2014) proposes the significance of IDLTF for learners' DPns. These claims are possibly applicable to all group activities where specific assignments are efficiently performed when they are well-facilitated by teachers.

1. The leader uploads the short silent film to members.
2. The group leader uploads general and specific tasks' instructions to members.
3. The group intensively view the material.
4. The group aligns concepts to the contents and instructions as guidelines.
5. The group infers on the issue which the silent film brings to the viewers.
6. Each group member shares ideas through their LMS accounts.
7. They google the material at the YouTube to match details.
8. The Leader gathers all the ideas/ information contributed by each member.
9. The Leader tasks each member to rank the given ideas according to importance.
10. The leader infers on to three highly ranked ideas.
11. The group meets to deliberate their inferences.
12. They tabulate gathered ideas or use graphic organizers.
13. They decide content words that dominantly represent their input's theme/s.
14. They write a narrative about the film collaboratively.
15. They consistently use past simple and past continuous verbs to present actions in the film.
16. They provide personal title through an article, an adjective and a noun.
17. They use simple and complex structures of sentences if possible.
18. They frame a single paragraph narrative available to each member.
19. They use the narrative to guide them in their specific tasks.
20. They create a slogan to represent the input's theme/s.
21. They check/confirm the accuracy of details by reviewing the film.
22. The leader sends the feedback to every member to critique.
23. They contribute to feedback as bases to finalize the group's narrative.
24. The leader assembles all the final feedback from each member.
25. They submit the narrative for teachers' review and confirmation.
26. They download teachers' confirmed and reviewed narrative.
27. They comprehend every instruction to perform specific tasks.
28. They execute instructions and guidelines of their assigned specific task.

#### **4.5 Students' specific project-based tasks as digital participants**

Upon every group's completion of collaborative narrative, each group will be assigned in a specific project from the tasks below. These proposed tasks in applying DL don't mean to replace or hamper the creativity of teachers, but could be used as models in order to cater to learners' needs that are largely based upon their levels, knowledge of technology and the projects' necessity to involve technological tools. Though they are

not all elucidated by examples and analyses, they demonstrate characteristics similarly to that of the scriptwriting's digital nature.

#### **4.5.1 Group 1- Musical scoring the silent film.**

1. Comprehending fully the group's narrative.
2. Using the theme of the narrative alongside occurring scenes.
3. Gathering possible musical background based from the narrative's dominant theme.
4. Evaluating the musical background gathered.
5. Choosing three appropriate tones for the film's background.
6. Examining the tones to relate with the film's theme.
7. Using the films' visual features as guides in choosing the right background.
8. Mixing or dubbing the motion picture to corresponding three musical background.
9. Previewing to finalize the project.
10. Editing the project when necessary.
11. Creating a slogan that caters to the audience based from the film's theme and issue.
12. Shortening slogan enough to be read clearly by viewers at it moves to another scene.
13. Embedding slogan to be displayed in every frame.
14. Using present active modality of the sentence structures.
15. Highlighting the slogan through color variations.
16. Composing an acknowledgement.
17. Composing a citation for the original work.
18. Reviewing musical scoring.
19. Showcasing outputs for appreciation, critiquing and evaluation in class.
20. Report projecting to stimulate interactions and discussions.
21. Finally editing by infusing the feedback.
22. Uploading the final project at teacher's LMS account.
23. Retrieving assessed work.
24. Uploading project at Facebook after being assessed.
25. Creating a disclaimer.
26. Linking work to the original version.
27. Responding to comments from viewers.
28. Reflecting on self-evaluation guidelines.

#### **4.5.2 Group 2- subtitling the silent film**

1. Comprehending fully the group's narrative.
2. Basing the subtitling from your written narrative.
3. Creating a title related with the film's theme.
4. Composing a title that contains an article, an adjective that will modify a noun.
5. Editing lines to shorten for easy viewers' reading.

6. Applying one type of font when subtitling.
7. Choosing and use content words from narrative.
8. Creating a slogan on issues that caters to audience.
9. Embedding the slogan at the beginning and end of work.
10. Using present simple tenses in the active mode.
11. Previewing project for further revision when necessary.
12. Composing an acknowledgement.
13. Framing a citation of the original work.
14. Showcasing outputs for appreciation, critiquing and evaluation in class.
15. Reporting projects to stimulate interactions and discussions.
16. Finally editing by infusing the feedback.
17. Uploading project at teacher's LMS account.
18. Retrieving assessed work.
19. Creating a disclaimer for the changes you made.
20. Uploading project at the YouTube.
21. Linking project to the original material.
22. Addressing audience comments.
23. Reflecting on self-evaluation guidelines.

#### **4.5.3 Group 3- scripting the silent film**

1. Comprehending fully the group's narrative.
2. Downloading a template that is appropriate to the script from the Internet.
3. Editing templates to suit the narrative and film.
4. Writing script orderly.
5. Using the narrative to write the script.
6. Synchronizing the narrative to the film's scenes.
7. Integrating film details in the script.
8. Modifying narrative to align with the script through the scenes when necessary.
9. Planning for group viewing and create changes if necessary.
10. Placing slogan at the end of the film.
11. Creating a background information based from your themes.
12. Embedding the background information at the beginning of the film
13. Integrating camera works such as angles/shots expressions of characters, setting, and scenes as they occur onscreen.
14. Observing proper tenses consistently.
15. Composing acknowledgement/s.
16. Creating disclaimer/s.
17. Connecting the link of the original work to the acknowledgement.
18. Editing grammar structures and finalizing your project.
19. Showcasing outputs for appreciation, critiquing and evaluation in class.
20. Reporting projects to stimulate interactions and discussions.
21. Finally modifying or editing script content by infusing the feedback.
22. Uploading project at teacher's LMS account for assessment.

23. Retrieving assessed work.
24. Uploading narrative and film script through a social media.
25. Framing a citation from the original work.
26. Tagging it to friends and classmates' social media accounts.
27. Linking the original work with projects for audience to critique.
28. Responding to their comments courteously.
29. Reflecting on self-evaluation for improvement.

#### **4.5.4 Group 4- Remaking the silent film with closing credits**

1. Comprehending fully the group's narrative.
2. Constructing a noun phrase for the film's title.
3. Using narrative to write a script.
4. Remaking but relate the film to the original.
5. Choosing a character who can justify the scene.
6. Internalizing with the theme of the film.
7. Assigning members for directing, setting, costumes, cinematography, edit, dubbing etc.,
8. Choosing appropriate music to internalize and reinforce the theme.
9. Dubbing the sound with the scenes.
10. Reducing slogan enough for viewers to read as it moves to another scene.
11. Creating a closing credit for the cast.
12. Composing an acknowledgement.
13. Crediting the original author.
14. Previewing the project for further revision.
15. Using a movie maker or its equivalent in editing film.
16. Conceptualizing a poster of the video through copying and pasting related pictures.
17. Showcasing outputs for appreciation, critiquing and evaluation in class.
18. Reporting projects to stimulate interactions and discussions.
19. Final editing by infusing the feedback.
20. Uploading the project at teacher's LMS account be assessed.
21. Retrieving assessed work.
22. Uploading the film to social media for intended audience
23. Creating a link to the original.
24. Creating a disclaimer to value the original work.
25. Responding to comments.
26. Reflecting on self-evaluation guidelines.

#### **4.5.5 Illustrative examples of project-based tasks outputs on narratives and script writing**

The following two outputs elucidate the series of activities which students as DPs are expected to follow from narrative constructions to scriptwriting the film. It is suggested that rigorous evaluation of these tasks have to be referred to the series of instructions



provided by teachers as DPs and facilitators. In here, narrative is expressed on how series of actions systematically happened onscreen. On the one hand, the scriptwriting output is expressed on how series of actions are happening onscreen.

**A. On narratives**

Digital Material: *Wings* by (Raveendran, 2014)

**A Young Man's Euphoria**  
*'In the early morning of a quiet urban area, a lost young man startingly woke up and found himself to have spent the whole night on a high building's roof. Suddenly, his fuzzy attention caught the sole presence of a cooing pigeon. He tried to drive it away but the bird remained in front of him. He promptly picked a piece of concrete and flung it to the unwary bird. Frightened, the creature swiftly flew away. He steadily watched it hovering away. Mesmerized by the motion, a strange idea occurred in his mind. Evidently drained, he stared at his trembling right hand as it slowly fixed the movement of a flapping wing. He turned to his left hand that slothfully was gesturing similar motion. He gradually stood and continued the same gestures. He hopped resembling a winged- creature moving closer towards the edge of the skyscraper's rooftop. He gazed down from his tremendously high distance to the city's abysmal streets then gaped at the rising sun. His face exhibited security and pleasure. Like a bird rapidly spreading its wings and shaking its head ready to travel, he took a fatal lift.'*  
**" Drugs do not lead to paradise."**

\* (Lidawan, 2016) with a few changes.

**B. On scripting the film for digital participation**

Digital materials: *Wings*\*

Script template\*\*

Non-digital material: Group Narrative

**Audio -Video Script**

Project Name: Video Script Prepared by group \_\_\_\_\_

Members: \_\_\_\_\_ Date submitted: \_\_\_\_\_

Audio		Video	
Order	Sound description	Other technicalities should they be infused	Applied types of camera shots and angles& other Descriptions
1.	Prologue: No sound No dialogue	Displays the onscreen: "This film was produced to warn the public about the deadly effects of using dangerous drugs which every government condemns since they shatter human lives	No image background, just a plain text with a red-colored

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		and the whole society, as well.”	background.  <b>Long shot</b> of the passage
2.	Piano music plays.	An early morning of a quiet urban area is shown.	Camera pans to show dawn. <b>Long shot</b>
3.	Music goes on.	Production outfit is presented in black background.	No camera shots and angles
4.	Music goes on.	A young man sleeps on a building’s rooftop.	<b>Long shot</b> of a man sleeping on a roof.
5.	Music goes on.	Screen fades- in to show the title, Wings.	No camera shots and angles
<b>Actual Scenes</b>			
6.	No dialogue Piano goes on.	Young man startlingly wakes up and finds himself to have spent the whole night on a lofty building's roof.	<b>Close shot</b> of the man. <b>Eye-Level Angle</b>
	No dialogue Flapping wings Cooing pigeon	His fuzzy attention catches the sole presence of a cooing pigeon.	<b>Close shot</b> of the pigeon, then shifts to <b>Long shot</b> of the sleeping character. Swings to <b>close shot</b> of the awakening man. <b>Eye-Level Angle</b>
	No dialogue	He tries to drive it away but the bird remains in front of him. He promptly picks a piece of concrete and flings it to the unwary bird.	<b>Close shot</b> of the pigeon and the man <b>Close shot</b> of a hand picking a concrete <b>Long shot</b> of the bird flying <b>Low angle</b>
	No dialogue Music goes on.	The creature swiftly flies. He steadily watches it hovering away.	<b>Long shot</b> of the bird flying then moves to <b>Close shot</b> of the man
	No dialogue Music goes on.	Mesmerized by the motion, he stares at his trembling right hand as it slowly fixes the movement of a flapping wing. He turns to his left hand that slothfully does similar motion. He gradually stands and continues the same gestures.	<b>Close shot</b> of the man’s hand gesturing wing <b>Long shot</b> of a man gesturing like a bird <b>Close shot</b> shifts to <b>Long shot</b> of the man <b>Long shot</b> standing while gesturing like a bird. <b>Eye - Level Angle</b>
7.	No dialogue Music goes on	He hops resembling a winged- creature moving closer towards the edge of the skyscraper's rooftop.	<b>Long shot</b> then swings to <b>Close up</b> of his

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			shoes at the edge of the rooftop
8.	No dialogue Music goes on.	He gazes down from his tremendously high distance to the city's abysmal street then gapes at the rising sun. His face exhibits security and pleasure. Like a bird rapidly spreading its wings and shaking its head ready to travel, he takes a fatal lift.	<b>Long shot</b> of the dawn then <b>Close shot</b> of the gesturing man <b>Long shot</b> of the man gesturing like a bird <b>Close shot</b> man lifts off to his death <b>Eye Level Angle</b>
9.	Music goes on.	Screen flashes: "Say no to drugs."	Passage is in black background. Word "NO" is highlighted in red. Others are in white to be read clearly
10.	Music goes on.	Credits follow	Credits in black background \
<b>Additionally created information should they be infused</b>			
11.	No dialogue No audio	<b>Slogan</b> " Drugs do not lead to paradise."	No types of shots/no angles Passage in black Backdrop in white
16.	No dialogue No Audio	<b>Acknowledgements</b> "we would like to give credits to A. Raveendran, the author of the video that we have used in writing the script. Credit goes to idearocketanimation.com for the script template that we have adapted, serif.com for the camera angles and thewildclassroom.com for the types of shots in scripting camera works.	No image background  No types of shots/no angles Passage in black Backdrop in white
17.	No dialogue No audio	<b>Disclaimer-</b> The information contained in the narratives doesn't directly represent the views of video's original author. The narrative has been made for the purpose of applying educational and technological knowledge and skills. It is not intended to replace the original work of the author. Furthermore, the scripted video through a template where the narrative was catered does not mean to modify the original template of the concept in idearocketanimation.com. It is our collective creative idea working on a school project to elucidate collaborative digital participations.	No types of shots/no angles Passage in black Backdrop in white

\*From (Raveendran, 2013)

\*\*Adapted from (idearocketanimation.com 2018) with changes.

#### **4.6 Teachers' self- evaluation in the proposed-project based digital participations**

Through the use of these simple questions, the teacher may be able to reflect on how far OTS' level from RBT and DT have been practiced and to what extent the IDLTF has been sufficed in instructions as DPs. The discrepancies discovered in evaluation process may enable them to make adjustments on the roles they perform for students' benefits in the completion of the instructive tasks. This could be principally administered by questioning themselves.

Have I performed the following?

- Conceptualizing a strategy that involved language and technology manipulation.
- Searching for inputs that exist in in real-world environment to suit the language lessons.
- Gathering possible suitable inputs.
- Evaluating the inputs' complexities to cater to learners' levels.
- Selecting an appropriate material among what were gathered.
- Identifying materials' suitable feature and genre.
- Reflecting on the value which the input is capable of in the lesson.
- Downloading the material from its source.
- Reevaluating material's ability for the attainment of objectives.
- Incorporating order thinking skills in the procedures.
- Relating the tasks to curricular goals and objectives.
- Integrating skills, schema, levels, media and contexts in students' tasks.
- Editing content to suit the goals and objectives.
- Formulating digitally- connected tasks out of the material.
- Relating the intended tasks on the availability of classroom technology.
- Reflecting on the necessity of technological tools in task performance.
- Inferring on its further instructional and cultural suitability.
- Saving the material in an external disc or at any retrievable storage.
- Recommending and presenting the material to students' in the classroom for class viewing.
- Facilitating discussions of issues and themes.
- Confirming a specific issue that revolves around the material restricting to overview reserving more in-depth ideas for the students' to discover.
- Explaining the general tasks and specific tasks' instructions.
- Responding to students' clarification.
- Grouping the students to be involved with collaborative active roles.
- Assigning group's specific tasks.
- Uploading general and specific tasks' instructions.
- Uploading the short silent film to group leaders' LMS accounts.
- Providing further references through the film's URL.
- Explaining the importance of disclaimers and acknowledgements.
- Monitoring students' project- development onsite and online.
- Imparting suggestions pertinent to the improvement of the projects.
- Sharing suggestions to cater to students inquiries.

- Reviewing the groups' narratives to confirm their viability to the project.
- Uploading their narratives after review to confirm their utilization.
- Facilitating in the projects' showcase to culminate the activities.
- Instructing students' further revision.
- Assessing students' projects.
- Instructing them to share their outputs in social media.
- Suggesting students' self-evaluation.

#### **4.7 Guidelines for teachers in forming students' self-evaluation of works**

(Lachs, 2000) suggests that peer assessment and self-evaluation can be helpful in measuring digital literacy. Student assessment provides learners' opportunity to express their thoughts and enable them to be involved actively.

The following proposed contents direct teachers on what should be included in formulating questions to encourage students' self-evaluation of their tasks adapted from the original questions raised by (Lachs, 2000) for students' self- assessment:

- The process of planning their work.
- The research they performed to update their work.
- The kind of assistance they needed and who provided them utmost help.
- The part that they have appreciated most in dealing with the project,
- The best part that made their work easy.
- The most difficult part of the project.
- Their feelings in using technology to create the project.
- The ideas or facts that are truly entrenched in their mind from the tasks.
- Their anticipation of who will use the projects they have made.
- Their intended audience for making the project.
- The points they have to consider when thinking about their expected audience.
- The ideas they are trying to infuse in the project and their approach and the feedback from the audience.
- The correctness of the information they used and their certainty about it.
- The part they didn't appreciate in dealing with the project.
- Their aspiration to a similar project.
- The things they have to change the next time they are assigned to do similar project.
- Their other observations.

#### **4.8 Project-based tasks application of integrative digital literacy taxonomy framework**

(McMahon, 2014) reveals that the nature of the discipline ultimately defines what constitutes the appropriate application of DL.

McMahon's framework (Table1) comprises the type of tasks, skills, contexts, schema, levels and media. These components define the IDLTF integration to DL which transpire when technology is used by teachers in processing instructions as facilitators and to students in the performance of collaborative instructional outputs. As indicated

on the table, skills applied are cognitive, affective, psychomotor and social capabilities applied by students. Contexts refer to the background or situation where the outputs are being processed and these could be cultural, creative, communicative, and civic among others with the possibility of integrating majority of these elements. The schema is the knowledge framework that are found in the modernly RBT, but could also extend to outside knowledge as influenced by the existence of socio-cognition materials thereby learning associates to connectivist principles. This component includes connectivist, metacognitive, conceptual, procedural and factual. Cognitive levels are drawn from the objectives which are in forms of activities acting as subskills in the production of outputs which determine the OTS of every learner as they perform the tasks. In DT, most of these increases cognitive development from remembering, understanding, applying, analyzing, evaluating and creating. Since this is an instruction that involves technology for result productions, students are immersed to several forms of media which is dictated by the kind of springboards the students are to be engaged with. Media includes text, audio, language, images and may contain contents that are surfaced by time such as networks where Internet plays relevance in exposing other media tools in the projects. IDLTF components will be systematically elucidated by one among the collaborative projects that will be analyzed to demonstrate digital participations.

#### **4.9 Applied framework principles from teachers' participations**

The tasks performed by teachers as digital participants relate to the IDLTF as they facilitate the production of outputs. DL in the classroom doesn't materialize with the absence of teachers to instigate and facilitate contexts which create the collaboration between teachers and students as DPs similar to how students cooperate together in the projects assigned to them by groups. To provide clearer understanding, Table 4 indicates that teachers demonstrate a bodily skill (psychomotor) when they upload (level) film they have examined containing images and audio (media) reflecting a civic (context) approach by their knowledge and skills of technology. Prior to providing the material, teachers have analyzed the knowledge (schema) that could be derived in it. The teachers as DPs underwent varied activities such as conceptualizing, searching, evaluating, choosing, gathering and identifying reflecting, downloading that suggest varied levels. Table 4 demonstrates IDLTF which could be further comprehended by referring to the examples of Table 1 along with its explanatory notes under 3.9 of the literature review.

**Table 4:** General Overview of applied framework principles from teachers' participations

Skill	Levels	Media	Schema	Contexts
Psychomotor	conceptualizing searching, gathering evaluating choosing gathering, identifying reflecting	time	<u>connectivist</u>	critical
Social	downloading reevaluating, editing	<u>images</u>	<u>metacognitive</u>	cultural
Cognitive	formulating, relating, reflecting inferring, saving recommending,	language	<u>conceptual</u>	creative
Affective	presenting, facilitating, discussing confirming restricting, reserving explaining, grouping, assigning, responding, <u>uploading</u>	network agency <u>audio</u>	<u>procedural</u> <u>factual</u>	communicative constructive confident civic

#### 4.10 General overview of applied framework from students' participations

To further comprehend IDLTF, we will be analyzing a specific project. As introduced earlier, every task assigned in each group comprises two procedures. The first procedure is a general preliminary project on narrative construction followed by a specific task. As projected in Table 5, scriptwriting represents the DPns of the scriptwriting group together with its narrative.

**Table 5:** General overview of the framework applied in students' film scriptwriting

General preliminary project: narrative construction				
Skill	Levels	Media	Schema	contexts
Psychomotor	uploading, googling, gathering, submitting, downloading, sending tabulating	Website, audio images. language Website	All of these were interconnected in the performance of the writing task:	All of these were interconnected in the performance of the writing task:  critical cultural creative communicative constructive confident civil
psychomotor/ Cognitive	viewing , writing framing, creating using, assembling	Website, audio images. language Website		
Cognitive	reviewing, executing contributing	Website, audio images. language Website		
Social	aligning, conceptualizing inferring, deciding, comprehending, providing,  sharing, tasking, meeting	Website, audio images. language Website		

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		Website, audio images. language Website		
<b>Specific project's performance: script writing</b>				
<b>Skill</b>	<b>Levels</b>	<b>Media</b>	<b>Schema</b>	<b>contexts</b>
Cognitive psychomotor	comprehending writing, using,	images, language audio, text	All of these were interconnected in the performance of scriptwriting	All of these were interconnected in the performance of scriptwriting
Psychomotor/ Cognitive	synchronizing, integrating	images ,language audio, text		
Psychomotor/ Cognitive	modifying creating, embedding	images, language audio, text		
Cognitive/ Psychomotor	integrating, observing, composing	images ,language audio, text		
Psychomotor/ Cognitive	connecting , editing , showcasing	images ,language audio, text		
Affective	appreciating, deliberating, responding	network, images ,language audio, text		
Social	tagging/sharing critiquing,			
Cognitive/ Psychomotor	evaluating, reporting, infusing,	network, branching language text		
Psychomotor	uploading, downloading, retrieving,	text ,language		
Psychomotor/ Cognitive	linking, framing, reflecting	images, language audio, text		
		network, branching language, text		



For narrative construction, the first row of Table 5 explicates the IDLTF principles. In here, the students manipulate their psychomotor (skills) through uploading, googling, gathering, submitting, downloading, sending and tabulating (levels). Since they are dealing with a silent film, it is relevant that they used the, Website, images and audio (media) of the film in framing a narrative. In doing the project as directed by instructions, forms of knowledge such as procedural, conceptual, metacognitive, factual and connectivist (schema) are intertwined in combined settings (contexts) such as critical, cultural, creative, communicative, constructive, confident and civil or may have chosen whatever context is applicable.

Furthermore, at Table 5's specific project's performance on scriptwriting, examples obtained from its first row demonstrate. Students are expected to manipulate their psychomotor and cognitive skills (skills), when they comprehended the completed narrative, wrote script and further used the narrative and the film when they completed their scripts (levels). Since the input is a movie, it contains images and sounds (media) that are manipulated through languages (media) and soon represented by texts (media). The script is in a form of texts which was made due to the instructions containing the forms of knowledge (schema) that served as guide in the construction of the script in a varied participation situations such as creative, cultural, communicative and even civic (contexts).

Table 6's chosen contents that represent the IDLTF and DT are fundamentally backed by (McMahon, 2014; Churches, 2008; Anderson & Khrawthol, 2002;) and further supported by (Pacific Policy Research Center, 2010; Trilling & Fadel, 2009; Brown, 2001; Partnership for 21st Century Learning, 2007; Domalewska, 2014; Laurillard, 2009; Brown & Cole, 2000; Lidawan, 2016; Brame, 2015; Warschauer & Healey, 1998; Hiradhar, 2015; Evans, 2004; Farren & Crotty, 2013; McKay; Hague & Payton, 2010; Ashrafi, 2013; Chickering & Ehrmann's ,1996; Richards, 2000; Berger, 2003; Smith & Wilhelm, 2002; Darling-Hammond, et.al 2008; Bell & Winn, 2000; Mckee-Waddell, 2015; Thomas, et.al 2007; Wegerif & Dawes, 2004; Loveless, 2002; Genc, 2016; Sulaiman, et.al 2011; Elbelazi, 2015; Genc, 2016; Kajder, 2003; LINCS, 2015; Ilomäki, 2014; Schön, 1983; Bhatt, 2012; Johnson & Johnson, 2009; Presby, 2001; Burns, 2002; Motteram, 2013) who in one way or another perceived that current existence of multimedia and technologies stimulate DL and participations among students defining 21<sup>st</sup> century educational transformations.

**Table 6:** Specific illustrative analysis of students' digital participations in film scriptwriting

<b>A. General preliminary project: narrative constructions</b>				
<b>Skill</b>	<b>Levels (general)</b>	<b>Media</b>	<b>Schema</b>	<b>Contexts</b>
(Subskill) Uploading the short silent film to members.				
1. Psychomotor skills	Remembering	Network	Procedural	Civic Constructive
(Subskill) Inferring on the issue which the silent film brings to the viewers.				
2. Cognitive	Understanding	Image/audio	Factual	Constructive Communica tive

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(Subskill) Sharing ideas through their LMS accounts.				
3. Social	Remembering	Network	Connectivism	Cultural
(Subskill) Writing a narrative about the film collaboratively.				
4. Cognitive/psychomotor	Creating	Language	Conceptual metacognition	Constructive Creative Communicative
(Subskill) Using the narrative to guide them in their specific tasks.				
5. Cognitive	Applying/understanding	Texts	Procedural	Constructive
(Subskill) Using simple and complex structures of sentences.				
6. Cognitive	Applying/understanding	Language	Procedural	Constructive Communicative
(Subskill) Checking the accuracy of details by reviewing the film.				
7. Cognitive	Evaluating	Language and image	Conceptual/metacognition	Constructive communicative
(Subskill) Assembling all the final feedback from each member.				
8. Psychomotor/cognitive	Creating	Network/language	Conceptual/procedural, metacognition	Cultural communicative
<b>B. Specific project's performance: script writing</b>				
<b>Skill</b>	<b>Levels</b>	<b>Media</b>	<b>Schema</b>	<b>contexts</b>
( Subskill) Downloading an appropriate script from the Internet				
1. Psychomotor	Remembering	Website	procedural	Civic constructive
( Subskill) Connecting to the original work after the acknowledgement.				
2. Psychomotor/social	Remembering	Website	Procedural	Civic constructive
(Subskill) Modifying script by infusing the feedback.				
3. Cognitive/psychomotor	Creating	network/language	Metacognition /conceptual	Constructive
( Subskill) Uploading project at teachers' LMS accounts for assessment.				
4. Psychomotor/social	Remembering	Network/language	Procedural	Civic constructive
( Subskill) Tagging it to a group of friends and classmates' social media account.				
5. Psychomotor/social	Remembering	Network/website	Connectivism	Cultural Civic
( Subskill) Responding to their comments.				
6. Psychomotor/social	Understanding	Language/network	Connectivism	Cultural Civic

To be more specific, some instructions under the narrative constructions and scriptwriting are presented on Table 6 to further explain the connection of IDLTF and DT principles which benefit students' learning and participations in technology-related projects. It has to be understood that as a broader framework, the IDLTF embeds DT. To explicate this table, we chose one each from narrative construction and scriptwriting by broadening the scope through adding emphases of the levels from DT to indicate the

incorporation of order thinking skills which are LOTS and HOTS with the presence of their subskills. The added specific levels are representations of the OTS for explanation, there could be numerous OTS that are present in the constructions of the projects that may have characterized the combination of all the levels of thinking.

Narrative construction can be explicated by Table 6's row number two containing cognitive skill that the learners manipulate to demonstrate their levels of understanding from LOTS when inferring issues that the silent film brings to the viewers. To be able to obtain inference(s), it is crucial that the media elements to be manipulated are the film's images and audio which are later on represented by text when narratives are completed through their factual knowledge in generating inferences under constructive and communicative situations aided by the employment of technology and language.

Additionally, for scriptwriting project, row number three is selected to represent IDLTF and DT standards. Students used their cognitive and psychomotor skills in demonstrating the creating level which is classified under HOTS, specifically, editing or modifying script content by infusing feedback. At this point, the forms of media to be manipulated are network and language since the participants need to send back their comments to the leader who is going to inculcate in the project through every member's conceptual knowledge and metacognitive knowledge in constructive context indicating everyone's ability to use technology (any LMS) purposively.

#### 4.11 Manifestation of collaborative tasks

There are many activities found in each project that explain the essence of collaboration. Table 7 below indicates some of these collaborative interchanges among students to indicate DL supported by researchers (Bell & Winn, 2000; Brown & Cole, 2000; Brown, 2001; Hague & Payton, 2010; Domalewska, 2014; Trilling & Fadel, 2009) who claimed that collaboration is an upshot of technological manipulation.

**Table 7:** Indicators of collaboration by students as digital participants

Collaborative activities		
Preproduction process Focus: narrative constructions (general)	Production process Focus: output constructions (specific)	Projects
<ul style="list-style-type: none"> <li>• Uploading the short silent film to members</li> <li>• Uploading general and specific tasks for each member</li> <li>• Viewing the film as a group</li> <li>• Sharing ideas through MLS accounts of every member</li> <li>• Gathering ideas/ information from each member</li> <li>• Tasking each member to rank ideas</li> </ul>	Musically scored silent film will be completed through varied activities performed by every member collaboratively.	Musical scoring
	A subtitled silent film will be created through the aid of each member.	Subtitling
	The short silent film's script will be completed and reinforced by cooperative interchanges.	Scripting
	A new version of the silent film will be generated through associated participations of each member.	Remaking/ Reshooting

according to importance <ul style="list-style-type: none"> <li>• Meeting with members to deliberate inferences</li> <li>• Writing a narrative about the film cooperatively</li>   <li>• Conforming to the accuracy of details by reviewing the film as a group</li> <li>• Sending the feedback to every member to critique</li> <li>• Performance of specific active roles that contribute to the creation of the projects</li> </ul>		
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Table 7 elucidates collaboration through group leaders' facilitation to members. Collaboration takes place through instructional tools. The presence of leaders where members do specific roles for building narratives in preparation to the second phase of the projects, adds to the essence of real collaboration. DPns among groups are enabled by technology, multimedia, computer and Internet applications. Their usages reinforce collaborative activities. Every member's contribution is accounted for the projects' fulfillment. Similarly, the second column of this table indicates the varied tasks of each group in which collaboration takes place. For every project, there are interactive activities that align to the principles of collaboration with the aid of decision-making. From the preproduction process where cooperative roles were shared to the postproduction, collaborative interchanges strengthened the building of the final projects manifesting objectives' attainment through cooperative engagement.

Aside from collaboration, DPs have performed creative activities by producing and learning something new from the activities as (McKee-Waddell, 2015) claim, such as the ones emphasized on Table 8. Equally significant, (Pacific Policy Research Center, 2010; Genç, 2016; Sulaiman, et.al 2011; Lidawan, 2016; Kolawole, 2012; Wegerif & Dawes, 2004; Loveless, 2002; Trilling & Fadel, 2009; Hague & Payton, 2010) advocate the concept of creativity or innovation under DPns of learners where an original concept generates new ideas.

**Table 8:** Indicators of creativity by students as digital participants

Original features	New features to be added from the original
1. The film's message relies on the images.  2. The film is silent except the repeated musical scoring and the provided background with the cooing of a pigeon.  3. The film relies on the images and scenes to obtain the meaning.  4. The film's message relies on the images, scenes	1. Students will be able to produce narratives out of it in varied versions. 2. Students will musically score the film through appropriate music aligned with its scenes and themes implied in the narratives. 3.1 students will create a subtitle out of the narratives to highlight comprehension of viewers. 3.2 The students will create a slogan to emphasize its message to the public to impart public concern.

<p>and background that cater to listening and viewing.</p> <p>5. The film has its original treatment to convey messages.</p> <p>6. The film is originally produced by an author.</p>	<p>4. The students will intensify comprehensions through a detailed script of the film including cinematographic technicalities. This detailed script may cater to readers' understanding.</p> <p>5. The students will create an innovative versions which may appeal to other audience's levels of thinking and learning styles-reenactment with dialogue.</p> <p>6. The students do not claim it's theirs through written disclaimers, credits and acknowledgement from the original author.</p>
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#### 4.12 Writers' observations on digital literacy and digital participations

Along the process of analyzing the tasks in terms of IDLTF, the writers have perceived a few characteristics of DL that may continuously influence teachers and students as DPs. These are:

1. The advent of accessible social media augments DL application.
2. DL allows DPs in education without necessarily using complex forms of technology.
3. DL necessity is dictated by the kind of inputs teachers attached with educational theories.
4. DL literacy provides cautious intellectual practices of selecting materials.
5. DL embeds cognitive development through technological employment.
6. DL can be simplified through teacher innovation.
7. DL activities can stimulate collaboration.
8. DL should connect to educational theories, objectives and goals.
9. DL happens when an activity demands for technology employment.
10. DL doesn't discriminate learners but expose them for productive knowledge and skills.
11. DL is attuning technical strategies for the instructions brought about by changing times.
12. DL can't be employed without students and teachers' knowledge and skills in technology.
13. DL's main goal is cooperative learning and sharing.
14. DL's main focus is on learning the skills or language instead of technological tools' operation.
15. DL is most effective when administered systematically not instantaneously.
16. DL integration is achieved through systematized instructions.
17. DL's products in instruction should be shared and served purposively for audience.
18. DL increases order thinking skills and uplifts learners' self- directions.
19. DL interweaves varied macro skills alongside target languages.
20. DL could be applied in all areas of learning.
21. DL activities are equal to the subskills found in the levels of order thinking skills.

22. DL's outputs are purposefully constructed for specific audience.
23. DL participation warrants social responsibilities.
24. DL can be integrated in multiple learning styles alongside order thinking skills.
25. DL could be achieved through CALL.
26. DL generates digital participations and accountability.

## 5. Recommendations

The following recommendations are proposed to bridge research gaps that this investigation have discovered, but failed to attain:

- An empirical investigation on the DL practices of teachers in the classroom along with students' observation on teachers' DL designed task in the classrooms.
- An empirical study that investigates the effectiveness and correlation between DL and DPs in project-based collaborative tasks.
- A survey of digital practices of language teachers comparative to students' digital efficacy and to teachers' digital efficacy which may attempt to draw significant relationships among digital knowledge of students and teachers themselves as DPs.
- An empirical study on the correlation between digital literacy and media literacy practices contributory in advancing English language instructions in the contemporary age.
- Curriculum developers should integrate DL across the curricula of all areas of learning when deemed compulsory.
- An educational institution that strives to seek for the fulfillment of its mission, goals and objectives should tap one hundred percent of their educators' participations in professional development activities. Therefore, commissioning one educator periodically to represent an institution for professional development is not prudent; quality education respects equal opportunity for all.

## 6. Conclusion

Classroom educators when exposed to educational technology acquire knowledge and skills to be qualified as DPs in and outside the classrooms. As critical thinkers themselves, they may emerge as differentiated 21<sup>st</sup> century facilitators if equipped with technological expertise. They are participants that have evolved from traditional teaching exposures to contemporary trends adapted and sanctioned by curricular programs; educators involve students into their innovative instructions generated by their optimistic immersions. Educators' trending roles nowadays are to be facilitators of tasks that they have conceptualized, designed and presented. DPs enable the participants to incorporate the framework and principles of DL. Being digitally literate, they can determine whether technology is necessary in facilitating lessons which are

reinforced by identified DT-connected goals. Furthermore, as digital literates, they have the capacity to choose materials and structure their lessons innovatively in triggering students' OTS from the very beginning of conceptualized projects. Digital literates inculcate the value of collaboration in approaching specific projects. One of the fulfilling tasks of educators as digitally immersed is to activate peer and self-assessment. Said assessments for students should be based on their performed outputs as selection of materials, preparation, design and presentation of tasks should be geared to teachers' self-appraisals.

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