

REEL TIME: A Case Study on Transformative Learning with Authentic Projects

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Abstract: One strategy for transformative learning (TL) is project-based learning, however, only when projects are designed to be real-world and authentic can TL be effective. This paper presents a case study on how a traditional Instructional Video Production course at De La Salle University-Manila was redesigned to integrate authentic projects, providing students real world experiences with real project teams and external expert feedback.

The Technical Education Skills Development Authority (TESDA) was identified as the partner institution for the students to work with. Students conceptualized and produced 25 videos for TESDA. Results show that when using authentic projects in the Instructional Video Production course, learning time is increased by 52% compared to a class without the authentic project. Self-reports from students show that beyond technical video production skills, they learned professional skills and soft skills working on the TESDA class project.

Key Words: transformative learning; project-based learning; authentic assessment; instructional design; authentic projects



1. INTRODUCTION

One important development in curricular reform at De La Salle University - Manila (DLSU) since 2004 is the crafting of the Lasallian Pedagogical Framework of Transformative Learning (Fig 1). The transformative approach shifts the classroom from an instructor-led to a learnercentered approach. The traditional teaching approach applies a transmissive mode of instruction focused on content delivery, where the class is instructor-led assessment is based on and standardized tests. The problem with transmissive instruction is that learning is not carried outside the classroom, and students just go through the motion of attending class, completing requirements and getting a grade.

The DLSU Primer (2012) defines Transformative Learning as the theory of teaching and learning advocates active engagement of the students in the learning process and a conscious effort by the educator to help learners transform their knowledge, skills and values to higher levels of understanding (p.27).

Teaching as	TRANSMISSION	TRANSFORMATIVE					
Knowledge	Set of Given Truths	Students' Conceptual Change and Growth					
Teaching and Learning Process	Content Delivery	Knowledge Construction Active Inquiry					
Teacher's Role	Content Expert	Facilitator					
Classroom Management	Instructor-Led	Multiple Resources Learner-Centered Authentic Evaluation Performance-based					
Assessment	Tests Recall Standardized						

Fig 1. Lasallian Pedagogical Framework of Transformative Learning

When students are actively engaged, they begin to think deeper about the activities or tasks they are working on. They begin to make sense of what they are learning, connect the dots and see the "bigger picture". Evidence of this is when students are able to simplify complex concepts, explain ideas clearly, and ask good questions. Students who are thinking deeper begin to ask "why", "how", and "what if" questions. Once this level is reached by the student, the importance on grades has shifted to the importance of seeking answers and understanding content better. This is when students will engage in self-learning to search for answers from multiple sources (i.e. Web, experts, books, journals, etc.) and through the incorporation of new information, they will begin to reframe their view of the world and their role in the world. Once students reach a stream of "aha moments", they are on the path of transformation.

2. CHALLENGES FOR TRANSFORMATIVE LEARNING IN TECHNOLOGY COURSES

Since 2005, De La Salle University - Manila (DLSU) began the implementation of transformative learning starting with revising the General Education Curriculum (GEC). In 2007, the university urged the Science, Engineering and Technology programs to implement transformative learning into their curriculum. As expected, there was resistance from faculty.

The College of Computer Studies (CCS) has been slowly coping to understand and apply the university's pedagogical framework on transformative learning. In 2008, the college decided to implement Project-Based Learning into the BS Computer Science curriculum as a strategy to transformative learning. Faculty began to revise their syllabi by adding more project requirements over the common requirements like seatworks, problem sets, exams, quizzes, and reports.

At CCS, training have been conducted repeated for faculty members to better understand the Lasallian Pedagogical Framework for the past few years. But there has always been difficulty understanding how to apply transformative learning. This issue is not unique to CCS, but applies to the entire university in general. In fact, Br. Armin Luistro, DLSU president and chancellor, admitted in the 2009 faculty general assembly: "There have been difficulties in translating the framework in the actual conduct of courses and while we have heard misgivings form a few individuals, Transformative Learning has taken significant slides since its implementation, with more teachers gaining a deeper understanding and appreciation of the framework and have and even eliciting positive feedback from both formal and informal evaluations of the teachinglearning processes by the learners themselves."



Nevertheless, the university continues efforts to help its faculty understand and apply Transformative Learning in their classes. The proponents attended a seminar on the Lasallian Pedagogical Framework at CCS last December, 2012 together with other faculty members from CCS. They observed that there is still much confusion among faculty members on what transformative learning really means and how it can be applied for Computer Science. Interviews and discussions with faculty members also reveal there is a constant struggle when applying transformative learning in the BS Computer Science program.

Since 2008, little documentation, research or literature exists on the college's efforts of implementing or evaluating Project-Based Learning into its curricula. There are no defined techniques or methodologies on how courses can be redesigned from being traditional / transmissive to transformative.

3. PROBLEM WITH PROJECT-BASED LEARNING AT DLSU-COLLEGE OF COMPUTER STUDIES

The proponents further analyzed syllabi and projects assigned by CCS faculty. While some courses still do not have projects as a requirement, many of those with projects were observed to have the following issues:

- 1. Project specifications follow a "cookbook approach"
- 2. Projects are individualized, take-home assignments
- 3. Projects are detached from class work

Based on the observations, the proponents believe that projects in CCS are used as assessment rather than a means for learning. This observation is aligned towards literature from Azim and Khan (2012) and Mueller (2012) that teachers often view the process of teaching, learning, and assessment as separate tasks, where curriculum is first taught, then learned, then assessed. Therefore, to improve the student learning, CCS needs to design more authentic projects considering that the assessment process as an integral part teaching and learning rather than view it as something that comes after teaching.

4. THE FRAMEWORK FOR AUTHENTIC PROJECTS

Over the past 30 years, two important changes in the field of higher education have been the rise of the rhetoric of 'student centered learning' and the focus on skill development in students. Both of these concepts have resulted in changes to the design of courses and teaching methods. They should also have led to changes in the methods used to assess students. (Sheldon, Ehrlich, and Wardop, 2012)

Authentic assessment is a form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills (Mueller, 2012). Using authentic assessment as a strategy to designing and implementing courses (Mueller, 2012) encourages the integration of teaching, learning and assessing. Azim and Khan (2012) considers teaching, learning and assessment as an ongoing, intertwined and all happening at the same time (Puckett & Black, 2000), and that they strongly influence each other. (Lombardi, 2007) and (Reeves and Herrington, 2010) define ten elements comprising an authentic learning experience (Fig 2) and Wilson and Schwier (2009) further approach authentic learning with five constructs namely: problem-based learning, authentic assessment, project management, scaffolding and social agency.

Although existing literature is extremely useful in characterizing an authentic from a nonauthentic learning environment or assessment, there is a lack of literature that really guides teachers on designing just authentic projects. Authentic projects are process-driven requiring students to complete "real-world" tasks over a period of time in collaboration with others as they would in a real workplace.

Real-world relevance	Reflection (metacognition)
III-defined problem	Interdisciplinary perspective
Sustained investigation	Integrated assessment
Multiple sources and perspectives	Polished products



Collaboration	Multiple interpretations
	and outcomes

Fig 2. Elements comprising authentic learning

The proponents suggest a framework for implementing authentic projects -- that it must include a real-world context, real teams, and real feedback (Fig 3).

4.1 Real World

Authentic projects must have a Real World context where the project is arranged with a partner organization; where targets and timelines ill-defined at the onset so that they are discovered and set by students; and where students will have to work in mixed venues such as school, home, online, and in the field or office.

Fig 3. Framework to Designing Authentic Projects

4.2 Real Teams

Authentic projects must have Real Teams where members include, not only the students and the professor, but external stakeholders like project managers, project sponsors, secretaries among others. External team members bring in he realities of the workplace concerning time, people, money, behavior. It is also necessary for the project to be managed externally to integrate the sense of urgency, professionalism, and work ethics.

4.3 Real Feedback

Authentic projects must have Real Feedback from external evaluators such as a content expert,

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project manager, or consultants. The teacher is not expected to be the sole person giving project approvals. Rather, the teacher is expected to play the role of project coach -- giving consistent feedback and guidance on mistakes and accomplishments.

Research reveals however, that benefits of authentic learning and assessment come at a cost. (Sheldon, Ehrlich, and Wardop, 2012) explain that creating authentic learning environments with 'real world' simulations and case studies, innovative assessment design, prompt feedback and opportunities for student reflection are timeintensive process. As students are required to engage in different methods of learning and continuous assessment this is also time intensive.

Nevertheless, if authentic projects are carefully thought of and well-integrated in CCS courses, projects will no longer be a means to assess but a means for learning. Projects will have a deeper, more meaningful purpose to the student, hopefully to the point that students reach new perspectives and learn things beyond any classroom topic. This will be evidence of transformative learning.

5. RESEARCH QUESTIONS

The research questions addressed in this paper are limited to: (1) How can an Instructional Video Production course be redesigned to integrate an authentic project? and (2) How is learning time affected by authentic projects?

6. METHODOLOGY

This paper presents a case study of implementing authentic projects in an Instructional Video Production course at De La Salle University -Manila. The framework by the proponents was woven into the design of an Instructional Video Production course for the first trimester of academic year 2012-2013. Two Instructional Video Production sections, comprising 27 students participated in this study; both sections were assigned to professor, Dr. Jose Lloyd Espiritu, one of the proponents in this paper. Data was collected from students through attendance reports, self reports on time spent on tasks, social network discussions, and project manager reports.



7. REDESIGNED INSTRUCTIONAL VIDEO COURSE

Modifying a traditional Instructional Video Production course to integrate authentic projects required defining (or redefining) the following:

7.1 Course Outcomes

Developing instructional videos requires more than just video production skills. Video production skills are focused on the technical and creative skills to go through pre-production, production, and post-production, ultimately to create a cinematically acceptable work. Instructional videos require an additional key dimension -- instructional design. With this in mind, the professor defined four (4) essential skills students must be able to perform in the course:

- Instructional Design ability to rethink and rewrite instructions from the "lens of the learner";
- 2. Storyboarding ability to design video scenes to be "pedagogically effective";
- 3. Scriptwriting ability to write video scripts that are "stories for the ears"; and
- 4. Video Production ability to producing quality videos that are "a millionviewers worthy"

7.1 The Real World Project

The professor identified the Technical Education Skills Development Authority (TEDSA) as the partner institution that will provide a real project opportunity to the students. TESDA is the prime institution that manages middle level, posttechnical-vocational secondary education and training, commonly known as TVET. TESDA training centers are popular because it is recognized as the authority of TVET in the Philippines. TESDA has identified in its National Technical Education and Skills Development Plan (NTESDP) of 2011-2016 that it must integrate ICT in vocational education. In 2011, TESDA conceptualized the TESDA Online Program, which aims to provide free online TVET courses.

The TESDA Online Program was anchored as the real-world project which required instructional videos for the online TVET courses. This was really a high-impact project for the students because it was a national-level, government-led project with a target reach of 500,000 to over a million students who can enroll online.

7.2 The Project Scope

The professor worked out a project scope with TESDA that can be completed within a 13-week period to fit the DLSU trimestral system. In early meetings, it was made known to TESDA the project must provide both a professional and rich learning environment for the students. Even so, it was assured that both parties must maintain professionalism and must fulfill their obligations to the project.

TESDA identified the need for instructional videos, in two online TVET courses: Food Attendant Servicing and Valet Servicing. Specifications on the number of videos, video treatments, and video formats were left open for the students to define. A Memorandum of Understanding (MOU) was signed articulating the terms of the agreement and also provide a clear understanding of what is expected of both TESDA and DLSU.

7.3 The Project Team

TESDA assigned 5 personnel from TESDA to work with the professor and his 27 students. Together, these 34 individuals formed the eTesda Team who would work on independent and shared responsibilities (Table 1) for the development of the instructional videos for the TESDA Online Program.

The professor determined the match between the skills of the students and the required project responsibilities, and also checks for equity of workload. Students decide on their individual roles and made recommendations on the number of videos, video treatment and video formats fitting for each online course. This, however, was subject to the approval of professor.

Table 1. eTesda Team Roles

	TESDA Personnel	DLSU Students
Project Manager (PM)	V	
Assistant Project Manager (APM)	~	
Content Experts (CE)	V	
Director (DIR)		V



7.4 Setting Expectations

The first meeting brief was held at the TESDA head office in Taguig City on the 3rd week of class. Although, the professor had already met the TESDA project manager several times prior to the meeting brief, it was most likely, the first time for the students to visit a TESDA office.

The meeting was intended to bring the team together face to face and to share the goals, targets, timeline, and deliverables expected from the project. The project manager from TESDA led the meeting by explaining the purpose of the TESDA Online Project, the target users and the rationale behind the need for instructional videos. He then introduced the other TESDA personnel (i.e. assistant project manager, content experts, production assistant) to the DLSU students. From here, he explained target dates and project roles and ended with a tour of the TESDA head office. Students were treated similar to newhire employees who were attending their on-boarding training on the first day of work. From the first meeting, basic ground rules were established:

- 1. Deliverables and timelines are nonnegotiable.
- 2. Multiple stakeholders are involved; the project is important.
- 3. Videos are intended for the online courses, possibly viewed by over a million users.
- 4. Communication will regularly take place through email and SMS.
- 5. Professionalism and work-ethics should be applied while "on the job".
- 6. Members must attend meetings held at the TESDA head office as required.

Setting of ground rules managed the expectations of all members of the eTesda Team and each individual had a clear picture what needed to be accomplished.

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7.5 Project Deliverables and Reviews

Project implementation began on the 4th week of class. The students first studied the two TVET courses and identified that a total of 25 videos were needed for both courses. To produce each video, students went through the pre-production, production and post-production phases and delivered the outputs required (Fig 4) for each.

Pre-Production		
Title and Scope	Production	Post-Production
Sequence of Instructions Storyboard Voice Over Script Script Review	Rehearsal Video Shoot Voice Over Recording Reshoot	Rough Cut Review Voice Over Review Retake Review Final Cut Review

Fig 4. Video Production Phases and Deliverables

TESDA did not impose strict specifications except for the need to have review sessions with the content expert to ensure the video scripts, scenes, and voice over was accurate and acceptable. Each review session was held at the TESDA office as a team meeting, where all members of the eTESDA, including the professor was present. Each video was ultimately to be approved by the content expert, project manager, and professor.

Classes were still held at the university as originally scheduled -- twice a week, for 13 weeks. The professor took the class as an opportunity to brainstorm, coach, and give feedback to the students. The classroom was a place for students to show their work, ask questions, and discuss different techniques to improve their videos.

8. RESULTS

8.1 Time Spent on Video Production

The eTesda team created 25 instructional videos resulting to 355 hours of video production work (Table 2). Video names are listed in no particular order. Some videos took longer to complete than others. Six videos (24%) were completed on the first take; 19 of the 25 videos (76%) required a second take; among these, 13 videos (52%) required a third take.



As seen in Fig 5., the most number of hours was spent on post-production among the three phases, amounting to 163.1 hours or 46% of the work. This was followed by pre-production, amounting to 123.6 hours or 35% of the work and production, amounting to 68.3 hours or 19% of the work.



aring Non-Authentic and Authentic Video Production Tasks

8.2.1 Learning time

In a non-authentic video production class, creating the 25 videos would take 170.6 hours, removing the real world elements like extra meetings, project reviews and revisions with content experts and project managers at TESDA. But when the authentic project design was applied, adding the meetings for review and revisions resulted to 355 hours. This shows students spent 52% more time working on their project if the project is real.

8.2.2 Learning Spaces

Video production time spent in school was 9.9 hours. Time spent for work at home resulted to 294.3 hours. Time spent at the TESDA office site resulted to 45.8 hours. And time spent online resulted to 5.1 hours. In total, video production time spent outside school (home, at the office site, and online) summed up to more than 300 hours. Data show that students spent more time outside the the classroom space.

8.3 Reflection and Realizations

Self-report from students show that they realize they were learning new things from project, the review sessions with experts, the project team, and the overall experience. They did not anticipate the following:

1. Different personalities when dealing with content experts. They considered one

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expert very nice, while the other "not an expert".

- 2. Working overtime -- at school, home, online, and even at the Tesda Office
- 3. Working on Saturdays and Sundays since this is common time for all team members
- 4. How difficult it would be to conceptualize and produce videos
- 5. Rehearsals with real "actors" would take time, from dialogues to acting
- 6. Capturing video from the right angles is difficult
- 7. Several practices would be required with the actor and the setting before recording a scene

They also reported that the different class experience allowed them to:



LEARNING MODES	HOME	HOME	SCHOOL	HOME	ONUNE	OFFICE	OFFICE	OFFICE	HOME	HOME	HOME	SCHOOL	OFFICE	arnce		
VIDEO NAME	IDS	107	ID REVIEW	VO SCRIPT	VORIN	2800 1	PROD 2	PROD 3	ROUGH	ROLIGH 7	EINAL CUT		REVIEW 2	FINAL REV.	TOTAL MIN	TOTAL HES
(time in minutes)							1995				1.1.1.1.1.1		111111			Contra Line
FRENCH	960	480.	30	240	30	240	240	240	720	720	1440	- 30	30	15	5415	50.3
RUSSIAN	960	480	30	240	30	120	120	120	360	360	720	20	20	15	3595	59.9
AMERICAN	960	480	30	240	30	120	120	120	360	360	720	20	20	15	3585	59.0
TABLE NAPKIN FOLDING 1	120	60	20	30	20	15	0	0	120	0	0	10	D	0	395	6.6
TABLE NAPEIN FOLDING 2	120	60	20	30	20	35	0	0	120	D	0	10	0	0	315	6.5
TABLE NAPKIN FOLDING 3	125	60	20	30	20	15	D	0	120	0	0	10	0	0	395	6.6
TABLE NAPEIN FOLDING 4	120	60	20	30	20	35	0	0	120	0	0	10	0	Ó	395	0.6
TABLE NAPKIN FOLDING 5	120	60	20	30	20	15	0	0	120	0	0	10	0	Ó	395	6-5
TABLE NAPKIN FOLDING 6	320	60	20	30	20	15	0	0	120	0	0	10	0	0	395	6.6
TABLE SETUP - BREAKFAST	325	60	10	45	10	20	0	20	80	0	80	10	0	10	465	7.8
TABLE SETUP - LUNCH	120	60	10	45	10	20	0	20	80	0	80	10	0	10	465	7.8
TABLE SETUP - DINNER	120	60	10	45	10	20	0	20	80	0	80	10	0	10	465	7.8
WELCOME THE GUEST	60	30	5	30	5	20	20	20	60	60	60	10	20	10	400	6.7
BIDDING GOODBYE	60	30	5	30	5	20	20	20	60	60	60	10	10	10	400	6.7
PRESENTING THE MIDNU	60	30	5	30	5	20	20	20	60	.60	60	10	10	10	400	6.7
SERVING APERETIF DRINKS	60	30	5	30	5	20	0	20	60	0	60	10	0.)	10	310	5.2
CARRYING SMALL TRAY	60	30	5	30	5	20	0	20	60	0	60	10	0	10	310	5.2
CARRYING LARGE TRAY	60	30	5	30	5	20	0	20	60	0	60	10	0	10	310	5.2
PRESENTING THE BILL	60	30	3	30	5	20	20	20	60	60	60	10	20	10	400	6.7
SERVING JUICE	60	30	5	30	1.5	20	20	20	60	60	60	10	10	10	400	6.7
UNFOLDING NAPKIN	60	30	5	30	5	20	20	20	50	60	60	10	10	10	400	6.7
LAVING TABLE CLOTH	60	30	5	30	5	20	20	20	60	60	60	10	10	10	400	6.7
TAKING ORDERS	60	30	- 3	30	. 5	20	20	20	60	60	60	10	10	10	400	6.7
SERVING THE ORDERS	60	30	5	30	3	20	20	20	60	60	60	10	10	10	400	67
CLEANING SOLED DISHES	60		5	30	5	20	.70	20	60	60	60	10	10	10	400	6.7
TOTAL MIN	4740	2370	305	1425	305	890	680	800	3180	2040	3900	290	170	205		155.0
TOTAL HRS	79.0	39.5	5.1	23.8	5.1	14.8	11.3	13.3	53.0	34.0	\$5.0	4.8	2.8	3.4	1	
	PR	E-PROD	UCTION		PRO	DUCTION			21		POST-PR	ODUCTION		~~~~		
		123.	6	8		68.3			-		1	53.1				

Table 3. Comparison of time spent on Non-Authentic and Authentic Video Production

	PRE-PRODUCTION		PRODUCTION			PRODUCTION			POST-PRO	TOTAL				
NON-AUTHENTIC VIDEO COURSE	79.0			23.8			14.8			53.0		170.6		
AUTHENTIC (REVIEW)	5.1			5.1						11.1				
AUTHENTIC (REVISIONS)	39.5	36%		0	18%		24.7	91%		99.0	61%	184.4		
TOTAL COURSE WORK	123.6	MORE		28.8	MORE		39.5	MORE		163.1	MORE	355.0	52%	MORE

- 1. Learn more about TVET programs
- 2. Work in a real project they could add to their resume or CV
- 3. Help thousands of people through a school project
- 4. Use Facebook to clarify questions among the team, send project reminders, disseminate schedules, keep track of progress, share Niles, even handle administrative matters concerning resumes and forms
- 5. Use YouTube to track and share group videos
- 6. Collaborate with professionals in their field
- 7. Handle more professional equipment

9. CONCLUSION

Transformative learning has always been difficult for faculty at the College of Computer Studies. One strategy for transformative learning (TL) is project-based learning, however, only when projects are designed to be real-world and authentic can TL be effective. Authentic projects are processdriven requiring students to complete "real-world" tasks over a period of time in collaboration with others as they would in a real workplace. Authentic projects must include three (3) characteristics:

- 1. A real world context where the project is arranged with a partner organization with ill-defined targets and timelines, set in mixed venues such as school, home, online, and in the field or office.
- 2. A real team where members include, not only the students and the professor, but external stakeholders like project managers, project sponsors, secretaries among others; and
- 3. Real feedback from external evaluators such as a content expert, project manager, or consultants.

A traditional Video Production course at De La Salle University-Manila was redesigned to integrate an authentic project with the Technical Education Skills Development Authority (TEDSA) as the partner institution for the students to work with. Students conceptualized and produced 25 videos for TESDA. Results show that when authentic project is integrated in an Instructional Video Course, learning time is increased by 52% compared to non-authentic projects. Self-report from students also show that



they realized new skills in video production and beyond video production as they interacted with external teams and experts throughout the project.

If authentic projects are carefully thought of and well-integrated in CCS courses, projects will no longer be a means to assess but a means for learning. Projects will have a deeper, more meaningful purpose to the student, hopefully to the point that students reach new perspectives and learn things beyond any classroom topic. This will be evidence of transformative learning.

10. RECOMMENDATIONS

Universities have defined a set graduate attributes that students must develop over the course of their degree or program. At De La Salle University, four expected Lasallian graduate attributes have been identified: (1) Effective Communicator, (2) Critical Thinker, (3) Reflective Lifelong Learner, and (4) Service-Driven Citizen. Transformative learning is identified as the approach to cultivate these graduate attributes among students. Courses at the university should begin to employ authentic projects, providing students real world experiences with real external project teams and real expert feedback. It is expected that will be implications on course schedules, cost, and monitoring.

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