



## **Senior High School Teachers' Readiness In Implementing 21st Century Learning: An Input To School Improvement Plan**

**Lerma P. Buenvinida**  
College of Teacher Education

**Maria Teresa M. Rodriguez**  
College of Teacher Education

**Sherwin B. Sapin**  
College of Computer Studies

**Nilda S. Alforja**  
College of Fisheries Laguna State Polytechnic University,  
Los Banos, Laguna, Philippines

**Francisco P. Panopio**  
Bitin Integrated National High School,  
Bay, Laguna, Philippines

### **ABSTRACT**

**This study aimed to identify the level of teachers' readiness in implementing the 21st century learning; determine the relationship between teachers' demographic profile and level of understanding 21st century learning; determine the difference between Bay and Los Baños districts teachers' readiness; and design a training program for teachers. The respondents were the regular/permanent senior high school teachers of the Department of Education in the said districts, School Year 2019-2020. The teacher-respondents were from three and six public senior high schools from Bay and Los Baños, Laguna, respectively; adopted questionnaire and used simple random sampling technique. Findings, reveal that the level of teachers' readiness was high but they still need professional development in order to: increase the knowledge about 21st century learning; assessment of students, use technology as a tool in teaching; and have advanced training on different strategies in handling 21st century students. The teachers' profiles such as sex, age, teaching position, years in service and educational attainment influenced the level of teachers' understanding in implementing the 21st century learning; while there is no difference on teachers' level of readiness between the Bay and Los Baños districts. Hence, a comprehensive training program is recommended to enhance teachers' professional and technical skills.**

**Keywords:** 21st century learning, teachers' readiness, advanced training, strategies, 21st century Learning

## INTRODUCTION

At present, the nature of teaching is changing as current lecturers are required to provide their students with 21st Century Skills (CS). This 21<sup>st</sup> century education entails more than merely teaching through lecture and discussion. There are issues whether current lecturers are able to grasp with the fast pace of technological advancement and to impart that skills to their students. Furthermore, despite having excellent academic performance, employers from various industries are concerned that fresh graduates lack the adaptability, multitasking, decision-making and problem-solving skills in the workplace [1].

The Philippines' Department of Education (DepEd) through the implementation of the Basic Education Sector Reform Agenda (BESRA) is pursuing a package of policy reforms to further improve education. One of its reforms is the K-12 Program which has opened the way to the mandated 21st Century Skills. These include Learning and Innovation; Information, Media and Technology; and Life and Career Skills. One of its progress indicators is the use of the National Competency-Based Teacher Standards (NCBTS) for assessing teachers' job performance through the self-assessment tool named as Teachers Strengths and Needs Assessment (TSNA).

In an attempt to inculcate every learner with 21<sup>st</sup> CS, most teachers face great challenges because there are many 21<sup>st</sup> CS to be instilled in limited teaching hours [2]. Furthermore, it was noted that many teachers presently apply the conventional method.

Since a teacher in the 21<sup>st</sup> century era goes beyond work in the classroom, it is necessary to understand the multiple contexts of teaching/player in education as well as the diverse roles of a teacher. It also requires ongoing professional learning activities including further studies and training, participation in professional development programs, and engagement in professional school-based learning communities in the higher education institution.

Readiness is thought to be a critical forerunner to successful implementation of the educational reform because the stakeholders are the ones acting on it. When readiness is high, stakeholders are more invested in the change effort, expend greater effort in the change process, and exhibit greater persistence in the face of obstacles or setbacks which contribute to a successful implementation of the new program [3]. Readiness to any changes in the educational system has enduring, situation-specific, and conditional components. It is the extent to which a person or a group is conditioned to accept, embrace, and adopt the reform [4].

The need [5] in educating learners to produce high quality generation with the capability to deal with 21<sup>st</sup> century globalization has become a very important agenda nowadays. Curriculum reformation encompasses all aspects of skills and competencies that can fulfill the needs of 21<sup>st</sup> century education where K-12 curriculum was implemented in the Philippines since SY 2012-2013.

The 21st Century Skill [6] is a global framework and one of the essential core elements of the K-12 Basic Education Program of the Department of Education. It calls for the holistic development of learners in the fast-changing 21st century world. The framework formulated by the Partnership for

21st CS includes Learning and Innovation Skills; Information, Media and Technology Skills; and Life and Career Skills.

In a study on science teacher readiness [7], it was emphasized that in order to cultivate the 21st CS, there should be active learning opportunities, practice and evidence of student learning. This also includes modern and innovative ways of assessment in the 21st Century. It noted that to prepare students for 21st century life, educators can build on educational goals that have been long a part of a global heritage. Furthermore, Corpuz & Salandanan (2012) emphasized that in order to remain relevant and interesting the teacher must possess 21st CS. Accordingly, the way teachers implement teaching process affects the outcomes of 21st learning [8].

Moreover, teachers are supposed to have a great capability in planning and implementing teaching and learning that fulfill the needs of immersing 21st century learning skills through effective, interesting and interactive pedagogy practice. In addition, learning can be carried out in meaningful ways through learning by implementing an approach where learners are stimulated to think and build understanding meaningfully (Ariffin & Yunus, 2017).

The Los Baños College of Fisheries (LBCF), formerly a CHED supervised institution, started offering its undergraduate programs since 1985. The prospect of offering more undergraduate programs became extensive and positive when LBCF was converted to a state university, now known as Laguna State Polytechnic University (LSPU). Since then, the university had attracted more students for the baccalaureate degrees. LSPU became one of the top choice schools for the education of the residents of Los Baños and nearby towns and cities.

Hence, this study was conducted to: identify the level of teachers' readiness in implementing the 21<sup>st</sup> century learning; determine the relationship between teachers' demographic profile and level of understanding 21<sup>st</sup> century learning; determine the difference between Bay and Los Baños districts teachers' readiness in implementing the 21<sup>st</sup> century learning; and design a training program for teachers

### **MATERIALS AND METHODS**

This study employed the descriptive-correlational research design. Correlational statistics described and measured the degree or association (or relationship) between two or more variables or sets of scores [9]. The data consisted of the personal profile of the respondents. The respondents of the study were the regular/permanent senior high school teachers of the Department of Education in Bay and Los Baños districts for School Year 2019-2020.

The teacher-respondents were from three and six public senior high schools from Bay and Los Baños, Laguna, respectively. Hence, this study make use of simple random sampling technique with 88% response rate. The collection of data was conducted before the lockdown of schools due to the onset of COVID 19.

The survey questionnaire used in this study was adopted and modified [10]. It is accomplished by the teacher-respondents, and it consisted of the following two main parts: Part I, focused on the Personal Profile and Part II, focused on the teachers' readiness in implementing 21st century learning.

For statistical analysis, mean and standard deviation were used to describe the profile of the teacher-respondents. Chi square test was used to determine the relationship of teachers' profile to the level of readiness in implementing the 21<sup>st</sup> century learning. Independent sample t test was used to determine the significant difference between the readiness of teachers in Bay and Los Baños districts.

## RESULTS AND DISCUSSION

Table 1 shows the distribution of teacher respondents according to their age. Majority of the respondents are within the age range of 36-40 years in Bay district (n = 9) and Los Baños district (n = 14).

**Table 1. Age distribution of respondents**

Age (years)	District (no. of respondents)		Total (no. of respondents)
	Bay	Los Baños	
21-25	3	3	6
26-30	8	9	17
31-35	8	9	17
36-40	9	14	23
41-45	3	12	15
46-50	0	5	5
51-55	2	2	4
56-above	0	1	1
<b>Total</b>	<b>33</b>	<b>55</b>	<b>88</b>

Table 2 shows that most of the respondents are females in Bay district (n = 20) and Los Baños district (n = 35). This indicates that the teaching profession is dominated by the female teachers/mentors.

**Table 2. Sex distribution**

Sex	District (no. of respondents)		Total (no. of respondents)
	Bay	Los Baños	
Female	20	35	55
Male	13	20	33
Total	33	55	88

As to civil status, Table 3 shows that the majority of teacher respondents in Los Baños district are married (n = 47), while in Bay district most of them are still single (n = 21). Vijayalakshmi (2002) reported that marital status did not have any significant influence on the teacher effectiveness.

**Table 3. Civil status distribution**

Civil Status	District (no. of respondents)		Total (no. of respondents)
	Bay	Los Baños	
Single	21	7	28
Married	12	47	59
Widower	0	1	1
Total	33	55	88

It is mentioned that the females are gradually taking over and dominating the teaching profession at the secondary levels of education [10]. Teachers must have a complex set of skills, insight, intelligence, knowledge, management, competence, dynamism, and diligence, to meet the challenges of the classroom. While both men and women teachers apparently possess these traits, they may meet the challenges in varied ways.

**Table 4. Distribution of respondents as to teaching position**

Teaching Position	District (no. of respondents)		Total (no. of respondents)
	Bay	Los Baños	
Teacher 1	14	17	31
Teacher 2	7	15	22
Teacher 3	8	10	18
Master Teacher 1	1	1	2
Master Teacher 2	3	12	15
Total	33	55	88

Table 4 shows that most of the respondents are occupying teacher 1 position in districts of Bay (n = 14) and Los Baños (n = 17), followed by teacher 2 in Los Baños (n = 15) and teacher 3 in Bay (n = 8). The highest position occupied by the respondents is Master teacher 2 in districts of Bay (n = 3) and 12 in Los Baños (n = 12).

**Table 5. Distribution of respondents as to length of service**

Years in Service	District (no. of respondents)		Total (no. of respondents)
	Bay	Los Baños	
1-5	12	18	30
6-10	10	21	31
11-15	4	6	10
16-20	3	6	9
21-25	2	3	5
26-30	1	0	1
31-35	1	1	2
Total	33	55	88

In terms of length of service, 21 teachers served between 6-10 years in Los Baños district, and 12 teachers served between 1-5 years in Bay district.

**Table 6. Educational attainment distribution**

Educational Attainment	District (no. of respondents)		Total (no. of respondents)
	Bay	Los Baños	
Bachelor's degree	13	17	30
Bachelor w/ MA/MAEd Units	10	18	28
MA/MS/MAEd Graduate	7	15	22
MA/MS/MAEd Graduate w/ EdD Units	2	5	7
EdD Graduate	1	0	1
Total	33	55	88

As shown in Table 6, Los Baños district had 18 teachers with BS degrees and master's units, 15 with master's degrees and 5 with Ed.D. units. Bay district had 13 teachers with only BS degrees, and 30 with advanced degrees or graduate units.

As shown in Table 7, the statement (no. 19) "I need advanced training on different strategies in handling 21<sup>st</sup> century students" obtained the highest mean of 4.61 (SD = 0.50) in Bay district and 4.64 (SD = 0.49) in Los Baños district, that were both interpreted as very high. It is followed by the statement (no. 6) "I engage students to work as a team to incorporate feed backs on group tasks or outputs" with a mean of 4.58 (SD 0.56) and 4.56 (SD 0.54) interpreted as very high in Bay and Los Baños districts, respectively.

The means of statements (nos. 14, 17, 18) "I need professional development in assessing 21<sup>st</sup> century students, Technology plays important part in 21<sup>st</sup> century learning, and I am confident in using technology as a tool in 21<sup>st</sup> century learning" were also interpreted as very high also. The overall means of 4.34 (SD = 0.54) and 4.43 (SD = 0.44) in Bay and Los Baños districts, respectively, were interpreted as High.

**Table 7. Teachers' readiness in implementing 21<sup>st</sup> Century Learning**

Indicative Statements	District				Overall		*Interp.
	Bay		Los Baños		Mean	SD	
	Mean	SD	Mean	SD			
1. I have an excellent understanding of 21st century learning	4.39	0.66	4.27	0.59	4.32	0.62	High
2. I involve my students in activities that promote creativity	4.27	0.63	4.27	0.62	4.27	0.62	High
3. I involve my students in activities that promote innovation	4.24	0.71	4.29	0.66	4.27	0.67	High
4. I involve my students in activities that promote critical thinking	4.27	0.67	4.35	0.62	4.32	0.64	High
5. I involve my students in activities that promote problem solving	4.24	0.61	4.44	0.54	4.36	0.57	High
6. I engage students to work as a team to incorporate feedbacks on group tasks or outputs	4.58	0.56	4.55	0.54	4.56	0.54	Very High
7. I help students to disseminate their ideas using media other than that of written paper (poster, blogs, video)	4.33	0.54	4.33	0.58	4.33	0.56	High
8. I assist students in comparing information from different sources before completing a task or assignment	4.15	0.80	4.36	0.59	4.28	0.68	High
9. I involve my students in activities that promote communication and collaboration	4.18	0.73	4.31	0.57	4.26	0.63	High
10. I am able to evaluate 21st century skills among the students	4.21	0.60	4.25	0.58	4.24	0.59	High
11. The 21st century skills are important to determine student's success	4.24	0.66	4.33	0.61	4.30	0.63	High
12. The Department of Education has clarified the features of 21st century learning	4.21	0.65	4.47	0.50	4.38	0.57	High
13. The curriculum promotes 21st century learning	4.39	0.61	4.45	0.50	4.43	0.54	High
14. I need professional development to increase my knowledge about 21 <sup>st</sup> century learning	4.39	0.66	4.49	0.50	4.45	0.57	High
15. I need professional development to build my teaching competence for 21st century students	4.33	0.69	4.56	0.50	4.48	0.59	High
16. I need professional development in assessing 21st century students	4.52	0.67	4.55	0.50	4.53	0.57	Very High
17. Technology plays important part in 21st century learning	4.42	0.61	4.60	0.49	4.53	0.55	Very High
18. I am confident in using technology as a tool in 21st century learning	4.45	0.67	4.58	0.50	4.53	0.57	Very High
19. I need advanced training on different strategies in handling 21st century students	4.61	0.50	4.64	0.49	4.63	0.49	Very High
Overall	4.34	0.54	4.43	0.44	4.39	0.48	High

*Legend: \*1.0 - 1.49: Very Low; 1.5 - 2.49: Low; 2.5 - 3.49: Moderate; 3.5 - 4.49: High; 4.5 - 5.0: Very High*

These findings conformed to a study which states that student's learning achievement highly depends on teacher's readiness in establishing the necessary activity [11]. Teachers are very ready to implement a teaching task when they have enough experience to prepare and create a supportive environment for the students. In other words, they attain greater confidence to handle the challenging behaviors inside the classroom. It was mentioned that upgrading the faculty skills is the most important indicator in staffing guidelines in order to support the faculty with the new K-

12 curriculum [12]. Further , it also noted that improving the quality of teachers is vital to meet the goal of K-12 in improving the nation’s student achievement [13].

**Table 8. Test of difference between profile and readiness**

Profile	X <sup>2</sup>	df	p-value
Sex	52.70*	23	< 0.01
Age	318.26*	161	< 0.01
Civil status	51.03	46	0.28
Teaching position	228.48*	92	< 0.01
Years in service	364.64*	138	< 0.01
Educational attainment	268.92*	92	< 0.01

\*Significantly different at p < 0.01.

Table 8 shows a significant relationship on respondents' profiles such as sex, age, teaching position, years in service and educational attainment. These profiles significantly influence the level of teachers’ understanding to implement the 21st century learning.

There is an evidence on the significant relationship between age and readiness of teachers’ in implementing 21<sup>st</sup> century learning [14]. This influences the pre-service teacher preparedness to use Information Communication Technology (ICT) in the classroom. Younger respondents are highly confident in their ability to teach using computers than older respondents. Hence, a key factor in readiness for computer use and integration in teaching is teacher’s age. The level of self-efficacy is not equally distributed across ages.

It is indicated that teachers with more years of experience are more prepared [15]. The teacher preparedness variables, therefore, support the advancement of teacher preparation programs, professional development, and hiring practices. Likewise, highly educated teachers are indeed more successful in terms of student outcomes [16].

The present study indicates that teachers are ready to implement 21st century learning but they still need professional development to increase their knowledge about 21st century learning, particularly to assess 21st century students and to use the technology as a tool in 21st century learning. They also need advanced training on different strategies to improve the outcomes of 21st century students.

**Table 9. Test of difference on the implementation of 21st century learners**

District	Mean	SD	t-value	df	p-value
Bay	4.34	0.54	-0.807	86	0.422
Los Baños	4.43	0.44			
*Significantly different at p < 0.05.					

As shown in Table 9, there is no significant difference on the level of teachers’ readiness in the implementation of 21<sup>st</sup> century learning between Bay and Los Baños districts.

Considering the mean values for both districts, teachers are ready to implement 21st century learning but they still need professional development related to 21st skills, in order to deliver their



best teaching efforts. With higher understanding of 21st century learning, teachers are able to teach effectively since this understanding influences how a teacher acts, make decisions and apply teaching practice [17, 18].

### CONCLUSIONS AND RECOMMENDATIONS

The level of teachers' readiness in implementing 21<sup>st</sup> century learning in both Bay and Los Baños districts was high but they still need professional development in order to: increase the knowledge about 21<sup>st</sup> century learning, assess 21<sup>st</sup> century students, use the technology as a tool in teaching, and have advanced training on different strategies in handling 21<sup>st</sup> century students.

The teachers' profiles such as sex, age, teaching position, years in service and educational attainment influenced the level of teachers' understanding in implementing the 21st century learning.

There was no difference on teachers' level of implementing the 21<sup>st</sup> century learning between the Bay and Los Baños districts.

Based from the findings and conclusions of the study, the following are the recommendations:

1. Encouraged teachers to continue their post graduate studies.
2. The school heads need to provide teachers with opportunities to upgrade their skills to handle specialized subjects in the senior high school.
3. The teachers need to develop modules that foster 21<sup>st</sup> century skills, particularly communication, critical thinking, collaboration and creativity.
4. It is recommended that the training program be adopted for the 21<sup>st</sup> century learning.

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## APPENDIX

### **Training Program (Professional Development- School Improvement Plan)**

<b>Activities/ strategies</b>	<b>Objectives</b>	<b>Date of implemen- -tation</b>	<b>Person responsi ble</b>	<b>source of budget</b>	<b>Expected Output</b>
Webinar Series: Flexible Learning: Synchronous, Asynchronous, Offline,	Enhance teaching-learning processes through different	June-July 15, 2020	Masters Teachers Teachers	School fund	Teachers are equipped to deliver learning through different platforms
Seminar-workshop: Practical Guide in using ICT in designing Instructional Materials	Enhance teachers' technical skills/ competencies	July 16- July 31, 2020	Masters Teachers Teachers	School fund	100% of the teachers prepared modules, learning materials using ICT
Training on Flexible Learning/Intensive Google classrooms	Encourage teachers to embrace change in their teaching strategies	August 1- 15, 2020	Master Teachers Teachers	School fund	Teachers are trained on different modalities
Training on Flexibility in Assessment: Context & Principles, Planning	Improve the assessment of learners	August 16- 30, 2020	School Head Master Teachers	School fund	Assessment of learners performance is ensured from different platforms
Continuous Faculty Development program	Encourage teachers to pursue their post graduate studies	August 2020-2023 (MA/MS),	Masters Teachers Teachers	School fund	Teachers obtained their post graduate degrees; not only taking up some units
Conduct of relevant research and extension program	Involve teachers in research and extension programs that would benefit the internal and external stakeholders	September 2020- August 2021	Masters Teachers Teachers	School fund	30% of Teachers in school have been encouraged to conduct basic/ action researches /extension program
Maximize the use of technology in teaching; webinar can be used in training teachers on the best practices (teaching strategies) amid this pandemic, COVID 19	Learn from other teachers their best practices in teaching amid this pandemic	October - December 2020	School Head Master Teachers Teachers	School fund	Teachers' technical, communication, ICT, creativity, and critical skills will be improved.