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Teachers' Perspectives, Readiness, and Needs on Action Research: An Extension Service Needs Assessment

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Abstract

The inclusion of action research as one of the teachers' major functions has been implemented by the Department of Education (DepEd), to provide teachers with effective ways to investigate problems or test new ideas in the classroom. However, despite the institutionalization of research in the basic education, teachers are hindered from conducting action research. This paper analyzed how public elementary teachers view action research, described their level of readiness, and identified the training needs in action research. Public elementary teachers from Sta. Cruz District Province of Laguna (*N*=110) participated in the study. Utilizing the descriptive research design, data gathering was done through the use of Google Form, and used statistical tools as mean, Kruskal-Wallis test, t-test, and Kendall Tau test.

The teachers showed positive views on action research and were open to the idea of conducting action research. However, it appeared that it is highly needed that they develop methodological skills in the use technology in processing data, analyzing statistical results, and constructing the data gathering instrument. The study concludes that teachers hold positive views about action research, were quite ready to conduct action research, but needed to develop some methodological skills particularly in processing and analyzing data. It was found that no significant differences exist in the teachers' readiness to conduct action research in terms of their demographic profile.

Results imply that teachers recognize that they are active participants in education research and value action research in their professional development and in the upliftment of students' learning. However, the teachers lack theoretical knowledge and research skills. An action plan was designed to intensify the collaboration between the DepEd Sta. Cruz Sub-Office Division of Laguna and the Laguna State Polytechnic University Sta. Cruz Campus (LSPU – SCC). The implementation of the plan may help lessen the teachers' anxiety in conducting action research.

Key words: teachers' readiness in action research, perspectives on action research, extension service needs assessment

Introduction

The roles of modern-day teachers are no longer confined to as organizers of classroom activities and managers of learning. The roles of teachers change due to methodological development or technological innovations. Aside from the traditional roles, teachers are now dubbed as catalysts for change. Being catalysts for change, they constantly seek ways on how to support and motivate students (Cebeci & Yildiz, 2018). Teachers have the opportunity to plan what they want their students to learn. Also, teachers play an instrumental role in changing the culture of a school, by providing guidance and support and increasing the level of rigor in the classrooms (Ankrum, 2016). Through catalytic teaching approaches, students become life-long learners, as their level of engagement and motivation are heightened (Rogerson & Chomicz, 2014).

In the Philippines, the Department of Education (DepEd) has been implementing many programs to counter the declining trends of key indicators of education outcomes. Through

decentralization, the Department shifted its focus to the schools by attempting to directly bring reforms through the SBM approach. The SBM approach aims to lessen bureaucratic restrictions over the schools so that they are able to focus on actual delivery of services and produce results. The higher-level offices within DepEd then concentrate on supportive, facilitative, and technical assistance functions. Thus, school heads can be involved in the actual screening and hiring decisions as they can see additional qualifications best fit to the students' learning needs. Also, innovative approaches were taken into consideration and the department became more focused on transparency with respect to the evidenced-based performance of the school (Maligalig et al., 2010).

The central goal of the Philippine EFA 2015 Plan is to develop learners' basic competencies that will bring about functional literacy for all. In terms of curriculum development, DepEd continuously enriches the curriculum in the context of pillars of new functional literacy. On the other hand, teachers are directed to continuously improve their teaching practices. This is based on the premise that improving teachers' practice of teaching is an important component of improving basic education outcomes (Alvaro, 2018). To improve teacher quality and teacher professionalism, the inclusion of action research as one of the teachers' major functions was initiated (Chou, 2011). It then becomes imperative for teachers to conduct action research to improve educational outcomes. In conducting action research, the teachers take a self-reflective and systematic approach in bringing out changes in instruction. The teachers are also able to examine their own teaching practices (Burns, 2014).

In the Philippines, the DepEd made major shifts and initiatives about action research. The department implemented the following: DepEd No. 24 series of 2010 or the *Basic Education Research Fund;* DepEd No. 13 Series of 2013 or the *Establishment of a Policy Development Process at the Department of Education*; DepEd No. 13 series of 2015 or the *Revised Guidelines for the Basic Education Research Fund;* DepEd No. 4 Series of 2016 or the *Amendment to DepEd No. 43 Series of 2015;* and DepEd No. 39 series of 2016 or *the Adoption of the Basic Education Research Agenda*.

The DepEd acknowledges the importance of research-based evidence as a basis for taking actions and decisions in ensuring the welfare and efficient learning of all students. The conduct of action research has many benefits. Action research is valuable as a problem-solving tool. It is a useful and effective way to investigate problems or test new ideas in the classroom. It can provide for reflection, improvement, and transformation of teaching (Segal, 2009). It is a response for more relevant and practical knowledge as it bridges the gap between academic research and day-to-day applications (Nolen & Putten, 2007). Action research tries to solve an immediate educational problem and issues such as pedagogy, classroom management, teaching and learning, assessment and instructional strategy (Chevalier & Buckles, 2019). Conducting action research can help teachers develop their professional skills, improve the teaching and learning process, help teachers explore issues concerning teaching and learning, and can enhance teachers' pedagogical knowledge and teaching practice (Wangdi & Tharchen, 2021). The action research process confirmed, affirmed, or expanded particular instructional practices and curriculum programs. Teachers appeared empowered and confident in regards to daily and future pedagogical practices and decisions (O'Connor et al., 2006). The conduct of action research can address students' diverse needs by examining their practice and acquiring skills and mastery of the content (Morales et al., 2016). It raises teachers' motivation teachers' motivation through: individual and collegial professional learning and development, making a difference for the students, promoting higher goal achievement, and in raising the awareness on and the status of the teaching profession (Bergmark, 2020).

Action research is conducted in real time; it focuses on simultaneous action and research in a collaborative manner (Coghlan & Brannick, 2005). It involves reflective practice. Teachers engage in critical reflection on their own instruction. They start with the context or purpose

and move gradually to the basic steps of diagnosing, planning action, taking action, and evaluating action. It is about evaluating the effectiveness of innovations and creative outputs of teachers that will help enhance the performance of learners (Tupas, 2019). Since the teachers are the ones that know exactly the current problems in the classroom, they can easily address the existing classroom problems and uplift students' learning (Gomez & Catan, 2021). This makes action research teacher-driven; since the research projects emanated from the teachers' own questions (Bergmark, 2020). However, teachers attend trainings, workshops and conferences but all had focused on concepts; no actual implementations on the process to articulate the procedure on doing action research (Tupas, 2019). Therefore, collaborative work with SUCs faculty or other agencies is recommended to help basic education teachers to make innovative outputs into functional products to enhance learning among below average learners.

Action research is a valuable exercise for teachers to undertake; it provides teacher with the technical skills and specialized knowledge required to effect positive change within classrooms (Hine, 2013). The conduct of action research develops teachers' academic competency and relational competency. Teachers are able to connect theory and practice using research results and build an open and collaborative climate with the students (Bergmark, 2020). Nagibova (2019) suggested ways of improving the practice of conducting action research. These are developing a positive collaborative environment, provision of resources, and the promotion of individual professional development. These can be achieved by providing emotional support and praise, providing workshops and trainings and improvement on the fundamental skills of the teachers about action research. For Ulla (2018), it is imperative that teachers be exposed to research training and workshops; for them to gain the necessary skills and knowledge. Reducing teaching workload is also an effective strategy to give teachers more time to conduct research, as well as providing research allowance. Teachers must be engaged as active participants in education research and create conditions for them to change their teaching practices through logical inquiry (Manfra, 2019). On the other hand, Tarrayo et al. (2020) suggests the promotion of a conducive research climate in schools may cultivate teachers' interest in research.

As catalysts for change, the teachers in the DepEd are instructed to conduct action research to improve the teaching learning process. However, despite the institutionalization of research in the basic education, teachers are hindered from conducting action research. Research suggests that teachers have difficulties in doing literature search, have writing anxiety, feel of having inadequate knowledge regarding the conduct of action research, not confident in presentation and publication of results, and have difficulty in data collection and analysis (Tindowen et al., 2019). According to Wangdi & Tharchen (2021), the teachers had positive perceptions about doing research but they were challenged by time constraints, academic overload, and lack of knowledge about research. Morales et al. (2016) reported that teachers find it moderately difficult to identify the problems to be investigated, literature search, developing the process, analyzing data, writing the findings, writing an article for publication, and using technology in statistical analysis. O'Connor et al. (2006) cited that the teachers find the action research process as time-consuming and overwhelming; with data analysis as the most difficult part.

Some of the academic challenges, as cited by Nagibova (2019), is the lack of teachers' theoretical knowledge about action research. The teachers have misconceptions about action research. They lack knowledge about action research, fear the use of the English language, and lack motivation. The teachers also lack skills in conducting action research. These skills pertain to time-management skill, ICT skill, English language skill, and reflection and research skills. Abelardo et al. (2019) revealed that the main challenges encountered by the teachers were: insufficient training and seminar on research, heavy teaching loads, lack of clear role of teachers in the school to conduct research, and busy with personal life. Manfra (2019) stressed

that time is a major constraint preventing teachers from conducting action research. Similarly, Gomez & Catan (2021) highlighted that the following factors prevent public school teachers in the DepEd from conducting action research: lack of time, lack of knowledge in conducting research, lack of training, lack of technical assistance, limited funding and resources, lack of interest, lack of confidence in English writing, difficulty in choosing a topic, fear of rejection, and poor health condition.

Norasmah & Chia (2016) cited that the challenges to action research implementation in Malaysia include workload, time constraints, lack of research knowledge and skills, and limited support. Likewise, Ulla (2018) stressed that teachers reported challenges as lack of financial support, heavy teaching load, lack of research skills and knowledge, and lack of research resources. Further, Tupas (2019) asserted that teachers' inability to formulate action research were attributed to factors such as lack of interest and ambiguous understanding about action research, and the lack of support from the administration and funding. It is also important to establish fair conditions for teachers' voluntary engagement in action research (Bergmark, 2020). The study of Tarrayo et al. (2020) found that the teachers have positive perception towards research, and high receptivity to and interest in it. However, they are somehow constrained by certain factors such as crowded teaching timetables or heavy workloads, lack of funding or financial support, which are contextual factors beyond their control, and difficulty in understanding (e.g., particularly the language) published research along with the challenge in contextualizing research findings for classroom use.

The BS Mathematics program of Laguna State Polytechnic University Sta. Cruz Campus (LSPU – SCC) conducted this study to ascertain the perspectives, readiness and needs of the DepEd teachers with regard to action research. The study is beneficial to the DepEd teachers, as a plan of action was designed to help lessen their anxiety in conducting action research. The BS Mathematics faculty of LSPU – SCC designed a training plan based on the identified training needs. The study is also beneficial to BS Mathematics faculty of LSPU – SCC, as they may share their expertise in conducting / writing action research, with a lengthier focus on data collection and analysis. The officials of DepEd Sta. Cruz and the LSPU – SCC also benefits from the results of the study, as linkages and collaboration between the two agencies was intensified.

The study was conducted to ascertain the perspectives, readiness and needs of the DepEd teachers with regard to action research. Specifically, the study aims to: (1) describe the teachers' perspectives with regard to the conduct of action research, (2) ascertain the teachers' level of readiness in terms of the different phases in the conduct of action research, (3) identify the training needs of the teachers in conducting action research, (4) determine whether significant differences exist in the teachers' level of readiness, when grouped according to demographic profile, and (5) design a plan of action responsive to the identified training needs of the teachers.

Materials and Methods

The study utilized the descriptive research design. The descriptive research method is a scientific tool for gathering information and describing the specifics of behaviors, patterns, or other phenomena. This method also allows the researchers to gather information needed to form a hypothesis. The current study used the survey method to obtain descriptive research.

The 110 participants are teachers from the elementary level within Sta. Cruz District Division of Laguna. They responded to the researchers' questions through a questionnaire. The items in the questionnaire included the teachers' perspectives about action research, their level of readiness to conduct action research, and technical needs of the respondents. Some of the items focused on their knowledge on methodological skills and statistical processes in action research. Convenience sampling technique was used in selecting the sample. Data gathering

was done through the use of Google Forms. The data collected were tabulated and analyzed using Microsoft Excel. The statistical tools used were mean, Kruskal-Wallis test, t-test, and Kendall Tau test.

The study adapted the community needs assessment model advanced by Sharma et al. (2000). It is divided into phases where the first phase is focused in planning and organizing. This phase includes information gathering and goal-setting. The second phase, which is the needs assessment methodology, involves the development of the needs assessment survey. In the third phase, the needs assessment data collection, coordination with the DepEd officials was done to field the survey form. The fourth phase is summarizing and disseminating the needs assessment survey results. At this phase, the training needs were identified and a plan of action was proposed. The fifth phase of the model is writing the final report.

Results and Discussion

After the approval from the R&D unit and written consent from the DepEd Laguna were obtained, 110 public elementary teachers participated in the study. The teachers are currently teaching at the different elementary schools as Callios Elementary School, Callios Escolapia Elementary School, Sta Cruz Central Elementary School, Gatid Elementary School, and Santo Angel Central Elementary School. There are 12.7% male and 87.3% female teachers. Most of the teachers are married (74.5%) and designated as either Teacher I, Teacher II or Teacher III (88.18%). More than half of them are in their middle age from 35 to 42 years old (57.3%), had been in the service for five years to 25 years (62.7%) but roughly half of them had attained Master's degree (48.2%)

Teachers' Perspectives with Regard to the Conduct of Action Research

The following presents the teachers' perspectives with regard to the conduct of action research. They were asked to indicate their agreement on the following statements, with 5 as the highest and 1 as the lowest.

It can be noted that the teachers *strongly agree* that conducting action research can help evaluate the effectiveness of interventions (M=4.21) and enable them to examine and explore classroom problems (M=4.20). The teachers agree on all other statements regarding the importance of action research. They agree that action research can create an impact on students' learning (M=4.19), is a problem solving tool (M=4.18), improve educational outcomes and enhance teachers' professional skills (M=4.17), and help teachers acquire new knowledge for classroom teaching (M=4.16). They also agree that action research is an interesting endeavor and is one of their major functions. The find action research valuable to the teaching process as it brings about changes in instruction. In conducting action research, teachers are able to examine instruction systematically and have a critical self-reflection on the strategies used.

The school administrators gradually nurture those in the lower ranks to conduct action research as it can easily address existing classroom problems and uplift students' learning (Gomez & Catan, 2021). The teachers are open to the idea of conducting action research as they find it is systematic and they are able to examine their own teaching practices (Burns, 2014). In the process, teachers are able to solve immediate issues on teaching and learning (Chevalier & Buckles, 2019) for the ultimate goal of enhancing learners' performance (Tupas, 2019). It can develop teachers' academic competency (Bergmark, 2020), mastery of content (Morales et al., 2016) and enhance their pedagogical knowledge and teaching practice (Wangdi & Tharchen, 2021).

Table 1. Mean Distribution on the Teachers' Perspectives with Regard to the Conduct of Action Research

Action research is/ can ...	**Mean**	**Description**
interesting	3.94	Agree
a major function of teachers	3.80	Agree
a problem-solving tool	4.18	Agree
valuable to the teaching-learning process	4.14	Agree
impact students' learning	4.19	Agree
bring about changes in instruction	4.13	Agree
enable teachers to examine and explore classroom problems	4.20	Strongly Agree
help acquire new knowledge for classroom teaching	4.16	Agree
engage teachers into a more systematic examination of instruction	4.12	Agree
enhance teacher's professional skills	4.17	Agree
encourage critical self-reflection	4.15	Agree
help evaluate the effectiveness of interventions	4.21	Strongly Agree
improve educational outcomes	4.17	Agree

Teachers' Readiness to Conduct Action Research

The following presents the teachers' readiness to the conduct of action research. They were asked to indicate their agreement on the following statements, with 5 as the highest that suggests being highly ready and 1 as the lowest that indicates not at all ready.

Results indicate that the teachers are *ready* to conduct action research as they easily identify the learners that need remediation (*M*=3.79) and the problem to be investigated and collect the needed data (*M*=3.65). The teachers are ready to determine the most appropriate intervention to use (*M*=3.58), formulate the hypothesis (*M*=3.55), and develop a research time table (*M*=3.53) and implement it (*M*=3.51). With regard to other knowledge and skills necessary to conduct action research, the teachers believe that they are ready for it. For instance, they consider themselves ready to search related literature, develop the methodology, design a research instrument, use appropriate language in writing, and reflect on the whole research process.

During the data gathering, a considerable number of teachers are still undecided on their sense of readiness to conduct action research. It was assumed that the teachers are now highly ready on the conduct action research, taking into account all the necessary knowledge and skills. However, it was disclosed that they are ready but not yet highly ready for such undertaking. It can be noted that they rated two items as undecided: use the most appropriate statistical tools and skill in interpreting statistical results. This connotes that teachers recognize the importance of action research but do not feel positive yet for this undertaking, especially when it comes to use of statistical tools and interpretation of statistical results. The academic rank of the teachers may attribute to this result, as majority of them are still holding Teacher I to Teacher III positions (88.18%) and more than half of them had not yet attained Master's degree (51.8%). Research suggests that factors that foster teachers' skills and knowledge and help build their interest on action research includes: training and workshops (Ulla, 2018; Nagibova, 2019), making research teacher-driven (Bergmark, 2020), promotion of research culture in schools (Tarrayo et al., 2020), assisting teachers explore issues concerning teaching and learning (Wangdi & Tharchen, 2021), making teacher feel empowered and confident (O'Connor et al., 2006), and emotional support and praise (Nagibova, 2019).

Table 2. Mean Distribution on the Teachers' Readiness to Conduct Action Research

In conducing action research, the teachers can / have ...	**Mean**	**Description**
easily identify the issue/problem to be investigated	3.65	Ready
identify the learners that need remediation	3.79	Ready
determine the most appropriate intervention to use	3.58	Ready
readily formulate the exploratory hypothesis	3.55	Ready
search related literature without difficulty	3.52	Ready
develop and write the methodology	3.51	Ready
skill in constructing data gathering instrument	3.52	Ready
develop a time table or research plan	3.53	Ready
implement the intended plan	3.51	Ready
collect the needed data	3.65	Ready
use the most appropriate statistical tools	3.23	Undecided
skill in interpreting statistical results	3.28	Undecided
share and communicate research results	3.64	Ready
use the appropriate language, e.g., English, in writing the proposal and the final report.	3.59	Ready
know the technicality in writing the references	3.53	Ready
reflect on the whole research process	3.54	Ready

Teachers' Needs in Action Research Formulation

The teachers stated that they *highly needed* the skill to collect the needed data for their action research (*M*=4.31). Although they have the ability to identify the problem or the classroom issues, still they perceived that they highly need to hone their skill in the use technology in processing data, analyzing the statistical results (*M*=4.28) and use the knowledge on statistical treatment (*M*=4.26).

Table 3. Mean Distribution on the Teachers' Needs in Action Research Formulation

In conducting action research, the teachers need to have the ability to ...	**Mean**	**Description**
identify problem / classroom issues	4.17	Needed
write the background of the study	4.23	Highly Needed
include the most relevant theories as basis of the study	4.25	Highly Needed
specify the research questions	4.25	Highly Needed
formulate hypothesis	4.25	Highly Needed
search relevant literature	4.25	Highly Needed
develop the methodology	4.26	Highly Needed
construct the data gathering instrument	4.28	Highly Needed
collect the needed data	4.31	Highly Needed
use the knowledge on statistical treatment	4.26	Highly Needed
organize gathered data	4.25	Highly Needed
use technology in processing data / statistical analysis	4.28	Highly Needed
analyze the statistical results	4.28	Highly Needed
discern how to write correct bibliographic entries	4.25	Highly Needed
write research proposal/ final paper	4.23	Highly Needed

This corresponds with the previous findings that they are yet undecided whether they are ready for these tasks as part of the action research process. The teachers believed that they highly needed to understand the regiment of the inclusion of relevant theories and literature,

formulating research questions and hypothesis, organizing gathered data, and writing bibliographic entry (*M*=4.25).

This means that the teachers necessitate to acquire these skills to effectively formulate an action research. The teachers are exposed to trainings and workshops in action research formulation but they need to have hands-on application of the process to articulate the procedure on doing action research (Tupas, 2019). They find action research as challenging in terms of data collection and analysis (Tindowen et al., 2019), using technology in statistical analysis (Morales et al., 2016), and in contextualizing research findings for classroom use (Tarrayo et al., 2020).

Difference in the Teachers' Readiness based on Demographic Profile

The difference in the teachers' readiness to conduct action research based on their demographic profile is one of objectives in this study. No differences were noted on the teachers' readiness conduct action research when grouped according to sex, age, civil status, position, highest educational attainment, and length of service. The difference between the mean ranks of all groups for their age, highest educational attainment, and length of service is not big enough to be statistically significant. This may be due to the fact that both male and female teachers are exposed to trainings and other undertakings in preparation to the conduct of action research. Also, as more than half of the teachers are in their middle age, they tend to have almost the same exposure to research activities. As most of the teachers are married and designated as teacher I to Teacher III, they tend to spend less time in the conduct of action research. Although the teachers had been in the service for a considerable length of time, they are still not confident to do action research on their own. The findings of the study is in contrast with Akuegwu & Nwi-ue (2018) that cited that there was difference between the male and female teachers in their research skill acquisition and that male teachers held positive attitude towards research than the female (Shaukat et al., 2014).

Table 4. Test of Difference on Teachers' Readiness to Conduct Action Research

Profile	test	test-value	p-value
Sex	t-test	-1.396	0.1759
Age	Kendal tau	-0.091	0.223
Civil Status	Kruskal Wallis	0.693	0.707
Position	Kruskal Wallis	2.402	0.493
Highest Educational Attainment	Kendal tau	0.135	0.098
Length of Service	Kendal tau	0.004	0.958

Conclusions

The study concludes that teachers held positive views about action research, were quite ready to conduct action research, but needed to develop some methodological skills particularly in processing and analyzing data. No significant differences exist in the teachers' readiness to conduct action research in terms of their demographic profile.

Results imply that teachers recognize that they are active participants in education research. They see the importance of action research in their professional development and in the upliftment of students' learning as they know exactly what is happening in their classrooms. However, the teachers lack theoretical knowledge (Nagibova, 2019), insufficient training and seminar on research (Abelardo et al., 2019), lack technical assistance (Gomez & Catan, 2021), and lack research skills (Ulla, 2018; Norasmah & Chia, 2016).

It is recommended that the elementary teachers be exposed to intensive trainings on the use of technology in statistical analysis, designing research instrument, and to have hands-on application of the process to articulate the procedure on doing action research. It is also

suggested that the existing linkage between DepEd Sta. Cruz Sub-Office Division of Laguna and the Laguna State Polytechnic University Sta. Cruz Campus (LSPU – SCC) be intensified. The BS Mathematics faculty of LSPU – SCC may share their expertise in conducting or writing action research, with a lengthier focus on data collection and analysis. A proposed plan of action is hereby presented as an appendix.

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Appendix

Proposed Plan of Action

Objectives	Activities	Persons Involved	Time Frame
• To intensify the existing linkage between LSPU and DepEd Sta. Cruz Sub-Office Division of Laguna	MOU Signing	○ LSPU Officials ○ DepEd Officials	Week 1
• To propose the plan of activities • To revise/ modify some schedule of activities to meet the availability of both human and non-human resources	Presentation of Schedule of Activities/ Collaborative Planning	○ DepEd Sta. Cruz Sub-Office Representatives ○ LSPU - College of Arts and Sciences Dean and Faculty	Week 2
• To guide participants in the formulation of the rationale and the research hypothesis • To assist the participants in describing the remediation to be used, after identifying the learners who need remediation.	Drafting the Action Research Proposal	○ DepEd Sta. Cruz Sub-Office Teachers ○ LSPU - CAS Faculty	Week 3 to Week 4
• To help-out participants in the designing the appropriate research instrument	Drafting the Action Research Instrument	○ DepEd Sta. Cruz Sub-Office Teachers / Master Teachers ○ LSPU - CAS Faculty	Week 5 to Week 6
• To present techniques on data analysis with the data on hand	Lecture/ Discussion on Statistical Analysis	○ DepEd Sta. Cruz Sub-Office Teachers ○ LSPU - CAS Faculty	Week 7 to Week 8
• To assist participants in writing the draft of the action research, focusing on sound methodology and analysis and interpretation of statistical results.	Critiquing of the Draft Action Research	○ DepEd Sta. Cruz Sub-Office Teachers and School Heads ○ LSPU - CAS Faculty	Week 9 to Week 10
• To give a hand to participants for the dissemination of the results through publication.	Dissemination of Results/ Publication of the Action Research	○ DepEd Sta. Cruz Sub-Office Teachers ○ LSPU - CAS Faculty	Week 11 to Week 12