

# Pre-Service Teachers' Levels Of Reflective Writing Through Weblogs

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**Abstract:** One medium to express students' reflection in the teacher education program is through weblogs found in various social media platforms. Weblog as medium for students' reflection has been found to have a positive impact in the teaching – learning process. Thus, this study investigated the contents of the pre – service teachers' reflective writings through weblogs and their levels of reflection in the course Teaching Geography and Natural Resources. Each paragraph or occurrence in the weblogs were analyzed through the identified codes. These reflections were distributed across levels of reflection. Although there were few occurrences categorized as non – reflective writing, still it is worthy to consider that these weblogs are leading to the next level, which is the beginning level of reflective writing. Thus, a rubric to determine the reflective level of students using blogs and procedures on weblogging as requirements for reflecting thinking is being proposed.

**Keywords:** levels of reflective writing, weblogs, pre-service teachers

## 1. Introduction

When you submit your paper print it in two-column format, including figures and tables [1]. In addition, designate one author as the “corresponding author”. This is the author to whom proofs of the paper will be sent. Proofs are sent to the corresponding author only [2]. Being a lifelong learner is one of the qualities that need to be developed among 21<sup>st</sup> century learners. To achieve this goal, students should become reflective thinkers. This will enable learners to see the connections among different lessons, relate abstract concepts to real world applications and review topics to come up with new information (Foster, 2015). It can also determine whether learning occurs in response to the needs of the learners (Bourner, 2014).

Requiring students to write reflective journals can help determine what students learned in class and how they learned them. There should be a medium or means for them to share their thoughts (Mansor, 2011). One medium to express students' reflection is through social media platforms such as Facebook found on the internet. Asano (2017) reported that teenagers dedicate as much as nine hours per day to social media platforms, with approximately thirty percent of their total online activity focused on social media interactions, predominantly on mobile devices. With this scenario, students' reflection to be shared in various social media platforms can provide opportunities for them to manifest communication skills and communicating/ITC literacy which are parts of the 21<sup>st</sup> century life – long learning skills. Thus, teachers are compelled to integrate blogging as a strategy in teaching since this is very popular among today's learners (Halie, et al., 2010 as cited by Dos and Demir, 2013).

Recently, blogs have become increasingly popular in the realm of education (Astuti et al., 2018). They serve as a strategic tool for enhancing active and interactive learning processes. Weblogs or blogs have many benefits if this will be utilized in the classroom since students spend most of their time using the internet. With the condition, weblogs found in Facebook or other social media platforms can be utilized as a medium to share student's reflection.

Mansor (2011) found that learning is effective using blogs for the students to take note to demonstrate through writings what they learned. Likewise, blogs help to create and sustain a “community inquiry (Martindale and Wiley, 2004 as cited by Foster, 2015). People collaborate with one another by sharing their knowledge, beliefs, opinions, ideas, and reflections using blogs (Dos and Demir, 2013).

Reflection should be an important part of the pre-service teacher's training since they are required to keep a record of what transpired during implementation of the lesson (Insuasty, et al., 2010), weblogging can be explored. Indeed, it can be considered as an instructional technology for teaching and learning (Boltman – Binkowski and Julie, 2014).

As future teachers in the Philippines, college students who are enrolled in the teacher education program are called to become reflective practitioners and acquire basic knowledge on the use of ICT. This is emphasized in the Philippine Professional Standards for Teachers (PPST) which serves as a basis for describing quality teachers from pre – service education to in – service training in the K to 12. This framework put emphasis on curriculum and planning, that pre – service teachers or beginning teachers should show skills in the use of technology to facilitate teaching and learning. Likewise, this study is in line with a private institution's Digital Campus Initiative. As an institution of learning at the forefront of innovative education, the school is geared towards offering human – centric academic programs anchored on digital instruction.

Considering all the things cited on the use of weblogs as medium for expressing pre – service teachers' reflection and the limited study on this topic, the research investigated the contents of the future teachers' reflective writings through weblogs and their levels of reflection in the Teaching Geography and Natural Resources course. It is also emphasized in this study that weblogs serve only as medium for pre – service teachers' reflection. Likewise, this paper did not assess the pre – service teachers' skills on writing reflective journals and on comparing the use of traditional paper and pen and weblogs to determine level of reflection.

All in all, this paper is one of the many ways to respond to the Digital Campus initiatives of the institution and to hone future teachers to become reflective practitioners as emphasized in the Philippine Professional Standards for Teachers. A rubric for determining the level of reflection through weblog is being forwarded that can be used by teachers and be distributed to their students as a guide in writing reflective journals and as an assessment instrument. It is also worthy to note that there is no available rubric anchored on the Reflective Writing Continuum (RWC) framework of Rivera (2017).

## 2. Problem Definition

This study investigated the contents of the future teachers' reflective writings through weblogs and to assess the levels of reflective writing through weblogs in the course Teaching Geography and Natural Resources.

## 3. Literature Survey

Future teachers are required to manifest reflective thinking which Solent Online Learning (2015) considers as an essential component to accomplish the requirements in the university to reflect on what knowledge they gained and connect this to their experiences to improve the quality of their lives and prepare them in the world of work. In addition, reflective learning becomes increasingly integrated in the higher education curriculum (Bourner, 2014).

To produce reflective practitioners is one of the purposes of higher education (Bourner, 2014). Like the findings of college educators, regular implementation of simple writing activities fosters the development of students' reflective thinking (Foster, 2015).

According to Broud, et al. (1985) as cited by Bourner (2014), being reflective is one of the characteristics of lifelong learners. The ability to reflect is an indicator that the person learns (Bourner, 2014). Reflection involves converting experiences into learning, where learning emerges organically rather than being premeditated (Bourner, 2014). This approach allows learners to identify connections between various lessons, link abstract concepts to real-world scenarios, and revisit topics to generate new insights (Foster, 2015). Reflection plays a crucial role in assessing whether meaningful learning occurs among learners (Bourner, 2014). According to Mansor (2011), learning new concepts can be achieved through requiring students to write journals. In the process, students also learned from the feedback they will receive in return (Mansor, 2011). Utilizing reflective learning journals provides an effective method for gauging the depth of students' comprehension regarding their learning experience (Mansor, 2011). Bourner (2014) enunciated the significance of evaluating reflective learning underscores the ability to offer constructive feedback to students and to ensure that they have acquired the skill to learn through reflection.

The ability to reflect should always be an important part of the future teachers' training so that they can monitor the process of learning (Insuasty, et al., 2010). It establishes the groundwork for evaluating situations and making reasoned decisions. Moreover, it affords educators the chance to bridge theory and practice, deepen their understanding of personal beliefs, adopt fresh perspectives, and employ

inquiry to guide instructional choices (Risko, Roskos and Vukelic, 2002, Condrman and Morin, 2004 as cited by Insuasty, et al., 2010).

There needs to be a platform through which students can document their reflections (Mansor, 2011). Blogging is an increasingly favored innovation among students and is being incorporated into university teaching practices. (Joshi, 2009).

In blogs, individual entries or "posts" are commonly displayed in reverse chronological order within online repositories (Foster, 2015). Weblogs, or blogs, have gained significant popularity as a quick and user-friendly method for individuals to share their thoughts with others online (Beale, 2007). Weblogs have become immensely popular as a convenient and user-friendly way for individuals to express their thoughts and ideas with others on the internet (Beale, 2007). Therefore, archives of blogs can serve as a valuable resource for understanding student learning, offering a foundation for continuous feedback and refinement of educational practices, fostering constructive knowledge (Solent Online Learning, 2015).

Students gave positive feedback when required to post their reflections through blogging in which they can share what they have learned, understand, and apply in real-world situations (Mansor, 2011). Likewise, blogs aid in the establishment and maintenance of a "community of inquiry." (Martindale and Wiley, 2004 as cited by Foster, 2015). It possesses the ability to involve individuals in collaboration, sharing of knowledge, reflection, and discussion (Dos and Demir, 2013).

According to Goh, et al. (2010), the advantages of blogging include: offering extensive customization options for appearance; enabling individuals to express comments and opinions within a secure online setting, with the option of anonymity; facilitating learning through collaboration and the exchange of perspectives; and promoting students' introspection and deeper reflection on their own blog posts or comments on others' blogs.

In a study conducted by Chaumba (2015), it was found that blogs remain pivotal in social work education and practice as an instructional tool for promoting reflective thinking skills. Similarly, they hold potential for enriching education through the encouragement of reflective practice. (Beale, 2007). Moreover, blogs also incorporate the aspect of regular peer readership, a significant departure from class journals. (Foster, 2015). Thus, students found it a useful and effective addition to their learning (Beale, R., 2007). Blogs serve as efficient means for reflective practice, bridging classroom learning with real-world applications and facilitating enhanced feedback from peers on practical design exercises beyond what students might typically receive (Beale, 2007). The perpetual publication and accessibility of blogs in cyberspace provide a distinctive aspect of classroom engagement (Martindale and Wiley. 2004 as cited by Foster, 2015). Blogging serves as a valuable practice for developing higher order thinking skills, fostering active and learner-centered pedagogy, facilitating authentic learning experiences. promoting associative thinking and nurturing interactive learning communities (Boltman – Binkowski and Julie, 2014). To support this claim, results showed that

those learners who are engaged in reflective and non-reflective activities through blogging have different depth of reflection (Boltman – Binkowski and Julie, 2014).

In a study conducted by Jayasainan (2018) it was found that most students found that weekly writing reflections using weblogs were an effective tool for showcasing their learning journey and facilitating reflection on their progress within a weblog-oriented setting. Through blogging teachers can gauge what is happening in the minds of the students like what they learned; the things they are interested in; and parts of the lessons that they had trouble with (Pearson, 2010; Svinicki and McKeachie, 2011 as cited by Foster, (2015). This claim is supported by the study conducted by Yang (2009) as cited by Chou (2011) that it is apparent that prospective teachers frequently engage in discussing the practical application of educational theories in real classroom settings through blog posts.

#### 4. Theoretical Background

This study draws its foundation from Rivera's (2017) Reflective Writing Continuum (RWC), which represents a reimagining of Hatton and Smith's (1995) Reflective Writing Framework for assessing reflective outputs. While Hatton and Smith's framework delineates four levels in the progression of teacher reflection—descriptive writing, descriptive reflective, dialogic reflection, and critical reflection—RWC offers a more detailed approach. It vividly illustrates the exact levels of students' reflective writing by presenting the four levels along with corresponding subcategories and characteristics. It is believed that RWC can gauge the specific reflective levels of the weblogs of the pre – service teachers in the Teaching Geography and Natural Resources course after content analysis has been done.

#### 5. Methodology

##### 5.1. Research Design

This study made use of qualitative methods of research through content analysis techniques. Content analysis was used in this study to categorize the text from each paragraph or occurrence in the reflections of the future teachers' reflections through weblogs on what they have learned in the course Teaching Geography and Natural Resources. Codes have been already identified using the Research Writing Continuum (RWC) developed by Rivera (2017).

##### 5.2. Participants of the Study

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##### 5.3. Source of Data

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reflections through weblogs on what they have learned in the course Teaching Geography and Natural Resources. Codes have been already identified using the Research Writing Continuum (RWC) developed by Rivera (2017).

##### 5.4. Informed Consent

The pre – service teachers whose age ranged from 19 to 20 years old were asked and consented orally to be part of this study. It was also emphasized during the orientation that they would be required to submit reflections on what they learned in class on whatever topic they like to work on as long as they are related to the lessons in the course Teaching Geography and Natural Resources. The pre – service teachers agreed with the plan and suggested that it is better to use a free social media platform where they will be posting their reflections in the form of weblogs in the free blog site "Thoughts Beyond Boundaries." Thus, all of them decided to participate and were aware that whatever they wrote in their weblogs will be made available to the public.

The pre – service teachers were also aware that the researcher will analyze the contents of their weblogs solely for the conduct of this study and this will not cause them any harm since their identity will be kept anonymous. Likewise, the contents had been screened to make sure that the reflections focus on how they learned the subject and what strategies they would use as future Social Studies teachers.

##### 5.5. Data Gathering Procedure

Each of the five pre – service teachers major in Social Studies was oriented that they would be required to submit reflections on what they learned in class on whatever topic they like to work on as long as they are related to the lessons in the course Teaching Geography and Natural Resources. The pre – service teachers agreed with the plan and suggested that it is better to use a free social media platform where they will be posting their reflections in the form of weblogs in the free blog site "Thoughts Beyond Boundaries." Thus, all of them decided to use weblogs and will be made available to the public. Then, the teacher – researcher gathered all these posts and analyzed its contents and determined their reflective level using the RWC by Rivera (2017).

##### 5.6. Data Analysis

In analyzing the data using content analysis, the teacher – researcher followed the following steps:

The first thing to be done in the analysis of each of the pre – service teachers' weblogs was to decide upon the level of analysis. It was decided that the analysis would be done by paragraph found in each of the ten (10) entries. It was found out that there were twenty – seven (27) occurrences or paragraphs to be analyzed in this study.

It was decided that all the ten (10) entries or weblogs with twenty – seven (27) occurrences or paragraphs were coded. Likewise, the RWC by Rivera (2017) will be used in categorizing the data as this continuum already contains the four levels or categories of reflective thinking such as description, explanation, exploration, and expansion. Sub – categories have already been identified in the RWC.



After deciding how many concepts to code for, it was decided that the teacher – researcher is the one who will code the data in terms of their occurrence guided by the description found in the RWC.

To distinguish concepts, the teacher – researcher made use of the characterizing features of each level or category of reflection as well as its sub-categories indicated in the RWC by Rivera (2017).

To code or to categorize and sub – categorize the text in each of the occurrences in the weblog entries of the pre – service teachers, the teacher – researcher followed to the rule she sets that each of the paragraph or occurrence should be read several times and refer to the RWC as frequently as possible. It was decided that irrelevant information found in each of the occurrences or paragraphs were still used to re-examine the data. It is believed that in categorizing and sub – categorizing data, this irrelevant information may somehow give clue/s to categorize and sub-categorize each of the occurrences under the characterizing features found in the RWC of Rivera (2017).

Manual coding was done by the teacher – researcher by reading through the text found in the 27 occurrences several times to classify them according to levels or category and subcategory of RWC by Rivera (2017).

After coding is done, the researcher examined each of the occurrences, which served as data and categorized each based on the levels or category of RWC such as Description, Explanation, Exploration and Expansion with their corresponding features or characteristics. Then each level or category has subcategories with distinguishing features that also served as a guide for the researcher to classify the data. The researcher to classify data according to level of reflective writing to draw whatever conclusions or generalizations are possible did several attempts.

Proposed rubric to determine the reflective level of students using blogs and procedures on weblogging as requirements for reflecting thinking is being proposed.

Based on the findings of this study, a rubric to determine the reflective level of students using blogs will be proposed. The said rubric focuses on the contents of the weblogs and not on the mechanisms of the entire paper. Likewise, procedures on weblogging as requirements for reflecting thinking are presented.

## 6. Results

The following are the contents of the weblogs of the Pre – service teachers in the course Teaching Geography and Natural Resources as published in the website entitled “Thoughts Beyond Boundaries”: (1) Geography as a subject; (2) Importance of studying different regions in the country; (3) Appreciating different tourist attractions in the Philippines; (4) Is teaching Geography easy?; (5) Teaching Geography as a future Social Studies teacher; (6) Culture, language and their connections to Geography; (7) The sins of industry; (8) Urbanization: the spread of modern – day jungle; (9) Teaching Geography: making students more interested; and, (10) What should Geography teacher be? These weblog entries that contained pre – service teachers’

reflection on what they learned in the course were subjected to content analysis.

**Table 1:** Sub- categories of description as a level of reflective writing

Sub-categories	Characterizing Features	Number of Occurrence	Example of Occurrence in the Weblog
Definition	Definition of terms Statement of facts Summary of concepts	0	
Narration	Narration of experiences Report of events	0	
Commentary	Expositions	1	“I learned from our discussion that there are many ways to teach Geography and these ways posed challenges on the part of the teachers. Mobile and online mapping tools are great help for teaching subjects, but the question is on how to teach effectively. Indeed, teaching Geography in the 21 <sup>st</sup> century includes working with mobile and online mapping tools, in addition to traditional focuses such as Physical and Cultural Geography and gaining a deep understanding of the physical landscapes. Our learners are digital native while teachers are digital immigrants and there is a need to integrate technology in teaching so that learning will effectively take place.” (Entry 1, para 2).
	Discussion of concepts	2	“Our rich cultural heritage as well as the physical landscape or Geography to be understood easily by our 21 <sup>st</sup> century learners should be taught with the incorporation of technology such as mobile applications. Teachers nowadays are being challenged to become adept in using technology for learning to take place in more fun and enjoyable ways.” (Entry 1, para 2).  “There are a lot of strategies to make your students enjoy and further relate to the subject Geography. A teacher should know how to involve his/her students in the discussion and one thing to do is to let your students speak out; share their experiences that can be related to the topic. One activity that can help to promote better learning in a Geography class is to let them explore and experience what really Geography is. Let them be in outdoor activities; allow them to

Discu sion of opin ions	6	<p>observe different events and wonderful happenings. One lesson so that they can involve themselves in the discussion and at the same time, it gives them ideas on how broad Geography is. One good activity in a Geography class is to give them situations where they can relate their knowledge and learning from the class and to measure how well they understand it.” (Entry 4, para 3)</p> <p>“Geography is a very fun and interesting subject but the way on how to teach this matter is difficult and standards should be achieved. In teaching Geography, one should have the interest to further analyze the earth, its physical features and the living things inhabiting it. The events and important things that are happening involving the earth, its resources, its people, and everything are also being studied in this branch of Social Science. In teaching Geography, one should possess the ability to understand and explain different phenomena, events, and others to successfully teach this subject. A geography teacher should be a keen observer and he/she should be aware of the happenings in and outside of the country. Studying is not enough to teach Geography effectively, instead, gaining experiences and exploring the world is one good investment for teachers’ strategy to teach this subject.” (Entry 4, para 2)</p> <p>“Teaching Geography is not easy. It takes a lot of experiences, studies, and knowledge to share what the world really is and how the features of the earth affect life and human activities and vice versa. An effective Geography teacher is willing to learn more, explore a lot and discover everything for him/her to share with the class and let his/her students experience Geography.” (Entry 4, para 3)</p> <p>“In teaching the course of geography, Social Science teachers should let the students determine the regions, provinces, and landmarks of their country. It helps the students to be aware of the places under their country. As a future teacher in this field, I should be able to get the interest of my students by not just memorizing the places but also by understanding why certain people act that way and what is the connection of geography to it. Knowing the reasons behind it, students will realize how blessed we are living in this country which has an abundant source of natural resources. It is also helpful on the part of the teacher to recognize the differences of the students in processing their own ideas. If we connect our learners in this way, they can create respect values their own places.” (Entry 5, para 1)</p> <p>“Current issue for me is the most</p>	<p>valid and interesting topic for the motivation activity of the teacher. Learners can share what they have been watched in the news or read in the newspaper. This will encourage them to share their opinions regarding that issue. It will also help us to evaluate our learner’s ability in defending his or her own ideas. In this line, teaching geography merely is easy for us to teach.” (Entry 5, para 2)</p> <p>“People are always finding ways to have a big difference in their lives. They are working for the several countries to have a high salary that can provide for the needs of their family. Through that, people are being able to experience the culture and speak the language of native people in a certain country. For example, teachers who are seeking to give luxurious life to his or her family, they go to the country that will help them. In a classroom they meet different people that is also different from him or her. A Filipino teacher to be specific will be misunderstood by the learners who are native in that place, so as a teacher we should be able to know the geography of that place for us to understand our students’ behaviors. Knowing the Geography of the places we are going to live is better to adopt the differences they have”. (Entry 6, para 1)</p> <p>“I have listed some ways that will enable the students to be more engaged in the learning process. First, is the hands-on activity such as experimentation and projects. Using this will let the students not just have a mastery of the topic but rather a clear understanding of what has been taught. Learning by doing is one of the best ways to learn because most students feel that they are assuming responsibilities. Second, consider the students’ diversity or differences, as it is always be considered in every part of the teaching learning process. Make sure that their special abilities are valued by the teacher. From this, considering the students diversity or differences will make them more engaged in the teaching learning process. The third one is because most of the students thought that geography was not a good subject, it is a challenge for the teacher to make them believe that they can. Make the learning fun. We can see how effective the teacher is.” (Entry 9, para 2)</p>
		Total	9

Table 1 shows that in terms of occurrences in the pre-service teachers’ reflection through weblogs, nine (9) occurrences had been analyzed to fall in the first level of the RWC, which is Description. This means that the 9 paragraphs are non – reflective. Although they are non – reflective, none of the paragraphs fall under the lowest sub-categories of description, which are definition and narration. This indicates that the pre-service teachers’ weblogs no longer

focused on definition of terms, statement of facts and summary of concepts they learned in the course Teaching Geography and Natural Resources. Likewise, narration of events or experiences without explanation can no longer be found in their reflections. It is also worthy to consider that all the nine (9) occurrences are classified under the sub-category of commentary, the highest level of description in the RWC. Therefore, even the nine occurrences are non – reflective in which the pre – service teachers failed to establish connections between what they learned in the course and their personal experiences, their weblogs are found in the last sub – category leading to the next level.

The findings in Table 2 are contrary to what is expected in the teacher education program, which emphasized that reflection ought to be an essential component of pre-service teacher training as they are tasked with documenting the occurrences during lesson implementation (Insuasty, et al, 2010). Looking at the findings in Table 1, Rivera (2017) emphasized that at the description level of writing, there is an absence of personal integration and contemplation of one's own insights. It's important to note that students participate in both reflective and non-reflective thinking through blogging, exhibiting different levels of depth in their reflections. Hatton and Smith (1994) as cited by Huntley (2008) articulated that there are several obstacles that hinder the demonstration of reflective practices among pre-service teachers, including preconceived notions about the teaching profession and the expectation of reflecting on their lesson implementation methods in various ways.

**Table 2:** Sub-categories of explanation as a level of reflective writing

Sub-categories	Characterizing Features	Number of Occurrence	Example of Occurrence in the Weblog
Explained Experience	Description of experience with some explanations	1	"I remembered two movies where geography made it possible for the viewers to enjoy the beauty of a certain place. The first one is the movie entitled 300. The movie is amazing! The geography itself made the movie very realistic. The beauty of the location was seen and even contributed to the overall effectiveness of the movie. The second one is the movie, "My Lady Boss" starring Coco Martin and Toni Gonzaga. Although I slightly don't like the movie, it let me saw the beauty of Batanes. Batanes is indeed one of the most wonderful places in our country as the movie showed. With the help of the location, the movie somewhat taught the viewers some of the culture, food, and places in Batanes that the people can be proud of". (Entry 1, para 3)
Explained Response	Expression of feelings,	2	"In our class, I realized the importance of studying the regions of the Philippines.

se	wants, or opinions with some explanations.		We should first familiarize ourselves with our country before studying other countries. The quiz bee we did in class is a very effective tool for me to learn about the regions. Aside from learning the regions, it is a very enjoyable thing to do. We do not just study the places in each region but the different prides or tourist's attractions in each region and it is very interesting for me. I really want to travel to different places in our country. It's my biggest dream. And I will strive harder to reach my biggest dream (Entry 2, para 3)
			"Geography is one of the interesting branches of Social Science for me. By studying these, I can learn new things – ideas, information, etc. about a certain place. I really enjoy listening and studying about the foods, culture, products and especially the beautiful tourist attractions of different places all over the world. In fact, when I was a child, I loved to become a stewardess so I could travel around the world. I am really excited with our discussion every meeting because I know I will not just know facts about a certain place, but I will also learn to teach those facts in a manner that will make my future students interested about the subject like how I used to like it. "(Entry 1, para 1)
Perceptual Interpretation	Explanation for experiences or decisions	1	"Current issue for me is the most valid and interesting topic for the motivation activity of the teacher. Learners can share what they have watched in the news or read in the newspaper. This will encourage them to share their opinions regarding that issue. It will also help us to evaluate our learner's ability in defending his/her own ideas. In this line, teaching Geography merely is easy for us to teach." (Entry 5, para 2)
Perceptual Justification	Explanation of generalization based on own judgment	1	We all know that there are places like Bukidnon, Maguindanao, Batanes, Lanao Del Norte, Pampanga, Quezon, etc. but do we know the regions where these places are located? I assume most of us don't know them. People nowadays don't really care much about the region. They

		simply know the place and the pride of that place. But it is not good. If a foreigner asked us about the region of a certain place, how can we answer if we don't know the region? We should not let the situation happen. We should take the initiative to learn about these things even if we have a busy schedule." (Entry 2, para 2)
Total	5	

After the content analysis, Table 2 shows that under the second level of the RWC, which is Explanation, five (5) occurrences in the weblogs of the pre-service teachers had been found. The said occurrences are distributed among its 4 sub-categories such as explained experiences, explained response, personal interpretation, and personal justification. The sub-category of explained response has the greatest number of occurrences as pre-service teachers expressed their feelings, wants, or opinions with some explanations on their personal experiences as they learn the course Teaching Geography and Natural Resources. On the other hand, the remaining 3 sub – categories such as explained experience, which is the lowest in the Explanation as well as personal interpretation and personal justification, have 1 occurrence each. It is also worthy to note that although the number of occurrences in the pre – service teachers' weblogs are lesser compared to Table 1, it is however, evident that the pre-service teachers' reflection moves from one level which is non – reflective to the next level which is the beginning of reflection as shown in the RWC. Therefore, the pre – service teachers at this point have started to reflect by providing explanations for thoughts, feelings or experiences as stated in their weblogs.

The findings in Table 2 are by Rivera (2017) that reflection involves engaging in metacognition and self-examination, wherein individuals purposefully explore their thoughts, feelings, actions, processes, experiences, and the underlying rationale behind them. Rivera (2017) also emphasized that a text to be considered reflective should show personal connection; otherwise, it is basically, an academic writing.

**Table 3:** Sub-categories of exploration as a level of reflective writing

Sub-categories	Characterizing Features	Number of Occurrence	Example of Occurrence in the Weblog
Alternative Reason	Discourse with oneself Mulling over reasons Exploring Alternatives	1	It is nice to know that there are a lot more beautiful tourist spots in every region in our country – Philippines. We all know some of the famous places in our country, with what our country can offer more. Even if I am from region 4A – CALABARZON, I still do not know all the beautiful places in our region. All I know are the famous ones like the Laiya Beach Resort, Tagaytay, Pagsanjan Falls, Basilica in Taal and many

			famous places but I didn't know that our region has a lot more to offer." (Entry 3, para 1)
Critique	Self – critique or critique of experiences which may be based on learning from text or resources or alternative perspectives	1	"During our discussion, I remembered that we talked about the significance of studying Geography. With that, I asked myself, what can I do with what I have learned? And I realized the fact that I love to travel around the world, I really need to study Geography. Studying Geography will let me know more about the places I want to go someday. It is not enough that I just want to go to a certain place to have a tour, but I need to study first the location, climate, culture etc. before I go there so that it will be easier for me to adjust to the place and communicate with the people. Another thing is that we are born on the Earth's surface where we can make a living and where we eventually die. Likewise, our knowledge of the environment is important." (Entry 1, para 4)
Hypothesis	Deliberation of the sides/perspectives/conditions of others in relation to one's experiences, perspectives or learning with exploration of possible reasons or offering hypothesis	2	"In teaching the course Geography, Social Science teacher should let the students determine the regions, provinces, and landmarks of their country. It helps the students to be aware of the places under their country. As a future teacher in this field, I should be able to get the interest of my students by not just memorizing the places but also by understanding why certain people act that way and what is the connection of Geography to it. Knowing the reasons behind it, students will realize how blessed we are living in this country which has an abundant source of natural resources. It is also helpful on the part of the teacher to recognize the differences of the students in processing their own ideas. If we connect our learners this way, they can create values to their own places." (Entry 5, para 1)  "We often have a culture shock whenever we migrate to other places we are not used to. In that way, we are often saying to ourselves that we should be taught to be familiar with that because being different from others is really depressing. You are like swimming in the desert, so it is how important the geography to our lives. We cannot live without this! Geography builds us; the culture, language, and everything we see are really part of it. Embracing this is one way of accepting others in our lives because we are open in changes. In further conclusion, Geography leads us on what we become." (Entry 6, para 2)
Generalization	Generalization from the	1	"It is important for us to study the regions of the Philippines and the different places in each region for us to become familiar with the



	rumination of multiple perspectives or other factors		location of different places in our country. Many of us nowadays don't even know how many regions; provinces and cities are there in our country. It is important for us to review this simply because of all people, we Filipinos should be the ones knowing more about our country. There are even a lot of foreigners who know about these, but why some of us or maybe most of us don't know the basic things or information about our country" (Entry 2, para 1)
Beginning Social Connection	Discourse that partially link experiences/situation to broader system, but the focus of discussion is still the consideration of other perspectives or other people involved	2	<p>"Honestly speaking, I really want to be like you someday. I also want to travel around the world. I am really excited upon hearing about your experiences about a certain place. I am excited to also visit places. I am looking forward to seeing the beautiful places in our country. I personally become more motivated to learn a lot of things about a certain place because I really want it and the way to tell stories about the place. When I become a teacher, I will make sure that my students will be eager and excited to explore the different regions in our country like what you did to us. It is important for us to know more about our country first before any other countries." (Entry 2, para 4)</p> <p>"When we talk about cities what imagery comes into mind? Isn't it columns of buildings and rooftops, skyscrapers and highways, a busy district full of professionals and corporates? The "modern jungle" as analysts would describe it. A gradual increase of infrastructure and population living in a city, it is predicted that by 2050 about 64% of the developing world and 86% of the developed world will be urbanized. That is equivalent to approximately 3 billion urbanites by 2050, much of which will occur in Africa and Asia. Notably, the United Nations has also recently projected that nearly all global population growth from 2015 to 2030 will be absorbed by cities, about 1.1 new urbanites over the next 15 years." (Entry 8, para 1)</p>
Total		7	

Table 3 shows that there are 7 occurrences in the pre-service teachers' weblogs under the category of Exploration in the RWC which has 5 sub-categories such as alternative reason, critique, hypothesis, generalization and beginning social connection. As can be noticed in the 5 sub-categories, they all explore multiple viewpoints and personal experiences, which are still incorporated to provide possible explanations for occurrences, thoughts, and feelings as they gain knowledge and understanding in the course Teaching Geography and Natural Resources. It is also evident in Table 3 that only 1 occurrence has been categorized in the lowest

level of RWC under the sub-category of Exploration which is an alternative reason. The same thing is observable in the next sub-categories, which are critique and generalization. However, the following sub-categories: hypothesis, which is in the middle of the RWC and beginning social connection, which is the highest sub-category have both 2 occurrences. These findings indicate that the pre-service teachers' reflective level as evident in the RWC are improving; that is their reflections through weblogs are becoming more reflective because they considered multiple viewpoints and they have established the connection of their experiences to the society.

The findings in Table 3 are supported by the findings of Rivera (2017) that students engaging in exploratory reflective writing move beyond personal opinions and consider alternative perspectives drawn from literature, theories, other individuals, or different frames of reference. Reflection empowers learners to scrutinize given situations or scenarios and arrive at responsible and sound decisions, bridge theory with practice, and attain meaningful insights into their beliefs while embracing new perspectives (Risko, Roskos and Vukelic, 2002, Condorman & Morin, 2004 as cited by Insuasty, et al., 2010).

**Table 4:** Sub-categories of expansion as a level of reflective writing

Sub-categories	Characterizing Features	Number of Occurrence	Example of Occurrence in the Weblog
Social Discourse	Discourse on the social system or forces that underpins experiences or situations	3	<p>"Industry provides us with almost all the goods we use in our daily lives, cars, phones, computers, food. You name it; they'll make it; an almost God-like provider of the needs and wants of mankind. The brain-child of the Industrial Revolution, an event which enabled man to materialize their potential for production, a catalyst for the development of our civilization. Indeed, we cannot deny that industry provided the chunk of convenience that we enjoy today but have you ever wondered and dared to ask, "At what cost?" Surely something as grand and convenient has an equivalent hefty prize." (Entry 7, para 1)</p> <p>"That prize, as many analysts and historians would say is the devastation of Nature. For all we know, behind the mask of a helpful patron is the face of a parasitic capitalist. Industry, as much as it helped us, also ruined us. Perhaps the greatest sin of industry is the plague it has spread upon nature, the one we call "Pollution". How did this happen? You may ask; the production of goods also produces waste; it may be in forms of toxic and other</p>



			chemicals. And what happens to their disposal? Have you ever wondered why factories are located near bodies of water? The industry dumps their waste on Rivers and Seas, an act which threatens not only marine life but also humans. In time, these accumulated wastes in the bodies of water will participate in the water cycle; thus, explaining the phenomenon of acid rain. The threat is not limited to water; factory exhaust produces carbon dioxide and other unwanted air pollutants, resulting into smog or in extreme conditions; “ <b>complete darkness</b> ” by blocking the light of the sun. Also, through industrial efforts of seeking materials, we have relentlessly destroyed the very shield that shelters us from this plague, the forests. We have nowhere to hide and no one else to blame.” (Entry 7, para 1)
			“So, the question boils; is urbanization a blessing or a curse? A blessing for it embodies a nation’s progress and development and a curse for it converts rural areas that can be otherwise used to support agriculture and wildlife, does the showcase of progress justify this conversion? Indeed, metropolises are jewels to behold by every progressive nation but how are we to sustain balance with nature if mankind devours the very space in which nature breeds? Is urbanization really the inevitable future?” (Entry 8, para 2)
Transformation	Call to action for social transformation	3	<p>“The video (“Piliin Mo and Pilipinas”) calls every citizen of our country to give many reasons to visit and enjoy its 7,107 islands. This call is also intended for the foreigners to come to the Philippines and experience its countless beautiful spots. For us, Filipinos, let us be proud of our beautiful country. There are still many parts of it that remain unexplored. While exploring, let us take care of our environment while having fun. (Entry 3, para 2)</p> <p>“What actions should we take? Should we abolish industry and return to the medieval way of life? The answer is “<b>No</b>”, as much as we may hate the sins that industry brings; we cannot live without it. An inconvenient truth Indeed, yet we could still aim for</p>

			<p>something sustainable; maybe I have looked upon it the wrong way. Maybe industry is not the mask of a parasitic capitalist. Perhaps, it is our own mask; a mask that hides our lack of concern and care for nature, a mask that lets us abuse our resources in the guise of a false future; a mask that hides us from the shame that we have brought upon ourselves. Let’s face it, we are the one responsible.” (Entry 7, para 3)</p> <p>Perhaps my question has an answer; “Yes, urbanization is the future. Whether you like it or not, you will be seeing more skyscrapers and columns of buildings, fewer farms and forests, A denser population and smaller living space. What can we do? The least we can do is to adapt to an urban lifestyle. Because let’s face it, there is no escaping this “modern jungle”. (Entry 8, para 3)</p>
Total		6	

Table 4 shows that there are six (6) occurrences under Expansion which is the last level in the RWC. There are only two (2) sub-categories such as social discourse and transformation, which after the content analysis both have 3 occurrences each. These findings indicate that the pre – service teachers’ reflection through their weblogs have already established and explained connection of the pre-service teachers’ experiences and situations while learning the course Teaching Geography and Natural Resources to broader socio – political, historical, and economic aspects of life. Likewise, they were able to encourage others towards social change and transformation. Thus, the pre – service teachers’ reflective level indicates broader perspectives.

The findings in Table 4 confirmed the statement of Rivera (2017) that in the Expansion level of reflective writing, students delve into the socio-political dimensions of situations. They broaden their contemplation to encompass social factors and influences that shape events and circumstances, as well as explore their social implications. Many teachers believe that using weblogs in the classroom is one of the effective ways of allowing students to reflect on what they have learned in the classroom particularly among pre – service teachers who are being molded to be reflective practitioners in the future. It is also emphasized that reflection should be a basic component of teacher development because pre – service and in – service teachers are called to evaluate and rearrange their teaching in order to optimize the teaching – learning process (Insuasty, et al., 2010) by allowing bloggers to give their comment or reactions on a certain news article, express their ideas and opinions, on various issues found in the web (Beale, 2007). It is also worthy to note that pre-service teachers are expected to be reflective since this is one of the ideal characteristics of future teachers (Hutley, 2008).

## 7. Discussion

When the pre – service teachers enrolled in the course Teaching Geography and Natural Resources were asked to write their reflection about the lessons, different topics emerged such as Geography as a subject; importance of studying different regions in the country; appreciating different tourist attractions in the Philippines; Is teaching Geography easy?; teaching Geography as a future Social Studies teacher; culture, language and their connections to Geography; the sins of industry; urbanization; making students more interested in Geography class ; and, what should Geography teacher be?

The pre – service teachers' reflection through weblogs on the knowledge and understanding they gained in the course Teaching Geography and Natural Resources are distributed across levels in the Reflective Writing Continuum by Rivera (2017). These findings are based on the content analysis of each number of occurrences per paragraph in the pre – service teachers' weblogs. Such analysis per occurrence was categorized under the four levels or categories in the RWC as follows: Description, Explanation, Exploration and Expansion. The lowest level or category in the continuum which is Description indicates non – reflective writing and starting from the level of Explanation to Exploration, the reflection through weblogs on what pre – service teachers learned in the course Teaching Geography and Natural Resources was analyzed as focusing on singular perspective; that is, on personal experience and moving to personal experience related to multiple views. Expansion is the highest level in the RWC in which the pre – service teachers' reflection emphasizes the influence of the social system on personal experiences. Likewise, the reflection calls for social changes and transformation. The pre – service teachers' reflection reached this level of reflection, and this is supported by the statement of Bourner (2014) who emphasized that reflection could assess whether learning has occurred that is significant to the learners. However, in this study pre – service teachers' reflections are in the form of weblogs published and shared through social media which in one way or another has advantages. Goh, et al. (2010) explained that bloggers can post comments and views in a “safe” virtual environment while choosing to be anonymous; blogging allows users to learn through collaboration and the exchange of views; and blogging encourages students to be more introspective and think deeply about what they write in their blogs or commenting on other people's blogs. Likewise, Wetmore, et al. (2010), found that reflective blogging demonstrated improvement in students' levels of reflection. In addition, Boltman – Binkowski and Julie (2014) found that students engage in both reflective and non – reflective thinking through blogging and have varying levels of depth of reflection.

## 8. Conclusion

The reflections through weblogs of the pre-service teachers focused on the contents of the subject Geography and Natural Resources and how to teach them as future Social Studies teachers. It was also found that reflections were distributed across levels in the Reflective Writing Continuum from Description, Explanation, Exploration and Expansion. Although there were few occurrences categorized in the lowest sub – category of Description, which is non – reflective writing, still it is worthy to consider that these

weblogs are leading to the next level, which is the beginning level of reflective writing. Thus, a rubric to determine the reflective level of students using blogs and procedures on weblogging as requirements for reflecting thinking is being proposed.

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