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The START Approach – A Simplified and Practical Tool for Beginning Researchers

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Abstract *– This pioneering study addresses the need for practical tools which could be used by beginning researchers in generating research topics. The objectives of this study are to present the use of the START Approach as an instructional innovation for classroom instruction in a research subject and to identify some themes on its strengths and weaknesses through content analysis of coded templates known as CST or Coded START Templates. Employing content analysis on forty-eight (48) CST taken as samples from a national training on research and using quantitative data analysis on selected content variables, findings revealed that majority of the CST have followed the writing pattern prescribed in the approach, have shown that majority of these templates have 'Very Highly Applied' the approach, and have reported that the thoughts in the CST as coded responses are 'Very Highly Continuous'. Using content analysis, the START Approach was found to display strengths in its implementation which includes its high doability, easy application, provision of thought continuity, collaboration, contextualization and localization. However, the START Approach may result to unnecessary topics and may require the help of a language teacher especially in the 'Refine' stage where appropriate verb usage is very crucial to determining the specific action which the user intends to conduct as a research. With this, the researcher recommends the use of the START Approach at the classroom level among all beginning student researcher in high school or even in college. Further studies may be instituted to determine the use of START Approach among advanced students in research.*

Keywords *– START Approach, practical and simplified tool, instructional innovation, novice researchers*

INTRODUCTION

Research learning is enhanced with correct practice and appropriate tools. The 'practice' in this context refers to various ways of instructional approaches which the researcher can employ to conduct research. Instructional Techniques in research instruction would either be teacher-centered like lecture method or student-centered like inquiry-based activities. The 'tools' in this context refers to various instructional materials or instruments used by students to understand research, and to conduct research.

The Department of Education has placed great emphasis on the significance of research in life with its inclusion of three (3) research subjects in the Senior High School curriculum of the K to 12 Basic Education Curriculum, viz: Practical Research 1 (Research in Daily Life 1, Practical Research 2 (Research in Daily Life 2), and Inquiries, Investigation and Immersion. The curricula for these subjects normally begin with a chapter on either 'Nature of Inquiry and Research' and 'Brainstorming for Research Topics'. However, the curriculum guide does not include any template on how to start inquiring and/or brainstorming. The researcher believes that the Department has trusted and this placed upon the research-teachers the task of teaching the students how to 'practically' learn research in daily life without any 'practical tool or guide' to even start with.

However, a region-wide study in the Philippines among grade 10 students and teachers reveal that while they showed somewhat positive attitude towards research activities, they manifested negative attitude, specifically, that of research anxiety and that they only moderately utilized proposed strategies along topics like preparation of research proposals (Formalejo & Ramirez, 2017). A study among undergraduate students in the Philippines revealed that the students have a positive attitude towards research though most of them display a negative attitude on difficulty of research (Oguan et al., 2014) which support the findings of Papanastasiou (2005) that undergraduate level students usually tend to view research methods courses negatively. Kakupa & Xue (2019) reported that studies have revealed that lack

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of interest in research is common among students, especially when they cannot see how it applied directly to their practice and daily lives.

Generally, various research findings on classroom instruction as summarized by Rosenshine (2012) reveal that students need cognitive support to help them learn to solve problems. The teacher modeling and thinking aloud while demonstrating how to solve a problem are examples of effective cognitive support. Worked examples are another form of modeling that has been developed by researchers that allow the students to focus on the specific steps to solve problems and thus reduce the cognitive load on their working memory. Modeling and worked examples have been used successfully in mathematics, science, writing, and reading comprehension, and there was no mention for any introduction of modeling and worked examples in research instruction.

Gay and Howard (2000) said that most of the available resources are descriptions of classrooms showcasing successful practice or lists of characteristics that define and describe culturally relevant teachers. What appear to be most needed in this area are practical tools and resources that contribute to understanding its implementation. Only when teachers have such tools available will they be able to make the theory on using culture as a resource commensurate with practice.

In connection, this study presents a practical tool which could be used by beginning students in research to generate research topic empirically. The approach is known as the START Approach which is an acronym for See-Think-Aim-Refine-Tell Approach and is the first practical tool available in the field by far and is developed by the researcher for use by beginning research teachers in high school and college.

OBJECTIVES OF THE STUDY

The objectives of this study are to present the use of the START Approach as an instructional innovation for classroom instruction in a research subject and to identify some themes on its strengths and weaknesses through content analysis of coded templates that employed such.

Specifically, it sought answers to the following: (1) How is a research topic generated through the steps of the START Approach?; (2) What is the profile of the Coded START Templates or CST in terms of: application, level of application, pattern, continuity, and level of continuity?; and, (3) Employing content analysis of the CST, what strengths and weaknesses can de deduced for classroom implementation of the START Approach?

MATERIALS AND METHODS

Materials Analyzed

This study mainly used forty-eight (48) coded template of worksheets on the use of START Approach which were submitted to the secretariat as a training worksheet during a national training in qualitative and quantitative research February 2019 held in Pangasinan, Philippines as sponsored by PARESSU, Inc which the researcher is the incumbent and founding President. The worksheets were referred to in this study as CST or Coded START Templates. The materials were coded by the secretariat from 1 to 48 irrespective of their content or any other mode of classification, nor ranking scheme.

Methods

This study employed content analysis – a form of qualitative research because it looked into themes pertinent to the study that are generated from 'contents' of the coded materials. The researcher employed quantitative approaches in data analysis where each of the 48 CST was tabulated in these five (5) variables: application – did it correctly apply the approach or not, level of application – if the approach is applied, to what level, pattern – did it correctly follow the writing pattern or not, continuity – was there a general continuity of thought from see to tell, and level of continuity – if the CST is continuous, to what level. All these five (5) variables were encoded and analyzed using SPSS. The study is qualitative in nature, hence, much of the themes were generated by the researcher and were supported or not supported by quantitative findings.

RESULTS AND DISCUSSION

The START Approach Guidelines

The START Approach, as a recall, is an acronym for See-Think-Aim-Refine-Tell Approach and is presently a pioneering approach or model in generating a research topic by students especially by beginning researches in both qualitative and quantitative methods. The approach is based on the idea that research is empirical and thus, it begins with anything that is seen. Further, the approach is based on the idea that research is public and thus it ends with a 'share-to-another' style. Much of the contents of the model resulted from the

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practical approach to research instruction of the researcher for almost ten (10) years of experience now.

To generate a research topic using the approach, the beginning research simply visits a place where he is comfortable to begin with a pen and a copy of the START Template. The following will serve as a guide:

1. *See.*
   In this stage, the student 'stares' at his environment and tries to focus on anything (i.e. an object like a ball, chalkboard, notebooks and the like) without thinking of any condition on what to look for and why you are looking for it. For example: I am seeing a glass of water in my study table right now.
2. *Think.*
   In this stage, the student 'thinks' anything about what he is seeing (i.e. the appearance of the object like color and texture, his feelings about the object, his first encounter with the object and the like). In this stage, just think freely. For example: I am thinking about the following:
   a. daily normal amount of water for a person
   b. the state of water pollution in San Tinte River
   c. why water has no taste and has no color
   d. what chemicals make up water
3. *Aim.*
   In this stage, the student starts to 'aim' to focus on a specific part of what he thought about what he saw. It is in this stage where interest as a criterion can be used. In this stage, the words which the student used in the 'Think' stage can be refined. For example: I aim to know more about water pollution in San Tinte River
4. *Refine.*
   In this stage, the student starts to 'refine' his aim by being more specific about what he aims to know. In this stage, the student combines what he already knows to what he does not know yet about his aim. For example: I want to refine my aim and specifically focus on the history about how the San Tinte River became polluted (Note: Instead of focusing on the polluted water itself, I want to focus on how it started being polluted.)
5. *Tell.*
   In this stage, the student 'tells' his classmates about his topic, particularly during brainstorming sessions of the class. This stage is strongly encouraged particularly when the student needs to know what his classmates think about his topic. His classmates can provide suggestions which he can use to further clarify his idea. The authors believe, 'A clear topic in mind is a research half-done.' Further, the student tells his teacher his plans and waits for further suggestions. Finally, in this modern world, the student can send as a message his research topic to any one of his classmates or any of his classmates who he thinks has a similar interest.

Any student who wants to generate his own research topic can use the approach even if he has learned more advanced skills or has practiced more sophisticated techniques in choosing research ideas, still the use of this approach will give a personal sense to him that he owns the topic himself.

The approach can be used anytime but the researcher strongly encourages to perform the approach in 5 to 10 minutes. In this time range, the student will have an uninterrupted and more focused thinking. For the researcher, doing the approach in more than an hour is not practicing the approach anymore.

The approach can be used anywhere but the researcher strongly encourages to perform the approach in an environment where he can relate most or at least relate better like in a strand-related room in the school like in a kitchen laboratory, science laboratory, computer laboratory, and the like.

Profile of the CST using quantitative analysis

Application

Findings revealed that majority of the CST have applied the guidelines on the use of the approach *(93.9%).* No matter how simple and practical the approach may seem, however, there were still a few of the CST which have not applied the approach *(6.3%).*

Level of Application

Of the 93.8% of the CST that employed the approach, findings revealed that the approach was 'Highly Applied' *(WM=2.00)*. This implies that the approach is easy to apply.

Pattern

Findings showed that majority of the CST have responses that were written using the pattern set in framing the answers *(89.6%)*. While findings suggest that the approach is easy to apply, a handful of the CST

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have responses that were written which did not conform to the pattern set in framing answers *(10.4%)*.

Continuity

Findings report that majority of the CST have thoughts that are continuous *(97.9%)* while only one CST has thoughts that are not continuous *(2.1%)*.

Level of Continuity

Of the 97.9% of the CST which have thoughts that are continuous, findings revealed that thoughts in in the steps from see to tell are 'Highly Continuous' *(WM=1.94)*.

Strengths of the START Approach

Using content analysis, the START Approach is found to display the following strengths:

1. *Very doable*. It has the ability to be done by any person who has vision since the foundation of the approach is empiricism – something must be seen, thus, very doable.
2. *Easy Application.* It has the ability to generate a research topic in a small amount of time with its use of plain observation in focusing on an object or item that is basically seen by the user.
3. *Continuous Thought*. It has the ability to allow for continuity of thoughts from the first to the last step since the 'product' of the previous step is essential to the response to the next step.
4. *Provides Collaboration*. It has the ability to allow for possible collaboration with a partner since the last step requires the sharing of thought to another researcher.
5. *Contextual and Local*. It has the ability to generate research on topics that are 'local' to the user – this means solving things just around him, since it is his environment that he directly sees. Thus, approach is very contextual.

Weaknesses of the START Approach

Using content analysis, the START Approach is found to display the following weaknesses:

1. *May result to unnecessary topics.* Topics that are generated may not be that important considering the purpose of research to 'advance the human life condition' at the most.
2. *Language barrier*. Especially in the 'Refine' stage, appropriate use of 'verb' is crucial to refine what the user seeks to conduct. Wrong use of verb may result to 'low-impact' topics.

CONCLUSION AND RECOMMENDATION

The researcher concludes that the START Approach in generating research topics has a generally accepted and organized guidelines for classroom use, especially by beginning researchers. Content analysis of the CST or Coded START Templates have followed the writing pattern, have shown that majority of these templates have 'Very Highly Applied' the approach, and that the thoughts in the CST as coded responses are 'Very Highly Continuous'. Using content analysis, the START Approach was found to display strengths in its implementation which includes its high doability, easy application, provision of thought continuity, collaboration, contextualization and localization. However, the START Approach may result to unnecessary topics and may require the help of a language teacher especially in the 'Refine' stage where appropriate verb usage is very crucial to determining the specific action which the user intends to conduct as a research.

With this, the researcher recommends the use of the START Approach at the classroom level among all beginning student researcher in high school or even in college. Further studies may be instituted to determine the use of START Approach among advanced students in research.

REFERENCES

Formalejo, W. I. & E. J. DR. Ramirez. (2017). Research Instruction among Secondary Schools Implementing Science, Technology and Engineering (STE) Program in MIMAROPA Region, The Palawan Scientist, Vol 9, pp 49-62

Gay, G., & Howard, T.C. (2001). Multicultural education for the 21st century. The Teacher Educator, 36(1), 1-16.

Oguan Jr., F. E. M. M. Bernal & M. C. D. Pinca (2014). Attitude and Anxiety Towards Research, Its Influence on the Students Achievement in the Course, Asian Journal of Management Sciences and Education, Vol 3 No 4, ISSN No. 2186-845X, pp. 165-172

Kakupa, P & H Xue. (2019). Students' Attitudes Towards Research: A Study of Graduate Education Students at a Chinese Normal University, Educational Process International Journal, Vol 8 No 2, ISSN No. 2564-8020. pp 97-110

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www.sajst.org

Papanastasiau, E. (2019). Revised Attitudes Toward Research (R-ATR) questionnaire English, https://www.researchgate.net/publication/331635157_ [3 Feb 2019]

Rosenshine, B. (2012). Principles of Instruction, American Educator, pp 12-39