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Self- perceived research competence among social sciences students: An investigative survey during the COVID-19 pandemic

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Abstract---The COVID-19 pandemic is widely regarded as the world's most serious public health disaster, and is considered as the greatest predicament that humanity has faced since the secondworld war. It's crashing down like a wave on people who are least prepared to handle it. This COVID-19 pandemic is much more than a health emergency. It has the capacity to cause devastating social, economic, and political catastrophes in each of the countries it affects, leaving deep scars. However, this study had made a very significant findings even the fact that the respondents have conducted their researches during the time of pandemic, when everybody was experiencing challenges battling with the COVID-19 virus. This study found out that the 169 social sciences students still manifested positive perception in terms of their research competence. They believed that they basically have a very high level of research competence in terms of cognitive, active and value-based components. They perceived themselves as highly competent in their research skills.

Keywords---self- perceived, social sciences, investigative survey, COVID-19 pandemic.

Introduction

The COVID-19 pandemic is widely regarded as the world's most serious public health disaster, and is considered as the greatest predicament that humanity has faced since the secondworld war. It's crashing down like a wave on people who are least prepared to handle it. This COVID-19 pandemic is much more than a health emergency. It has the capacity to cause devastating social, economic, and political catastrophes in each of the countries it affects, leaving deep scars. Apparently,

each day people are losing their jobs and income without even knowing when this global health crisis, that has been affecting everyone's life, ends. Those nations that are so dependent on tourism are undeniably affected. In fact, it was predicted by the ILO that there will possibly be lost of jobs that could reach to 25 million. Among this countries that felt the great negative impact of the pandemic, is the Philippines. Aside from the death toll recorded, many Filipinos had become jobless too due to the shutdown of different private companies. Even in the educational sector, an abrupt change in the teaching-learning aspect was also evident. From learning in the four corners of classrooms, there was no other way but to shift to the online modalities which seemed to be the safest among all modes of learning amidst pandemic. From March 2020 to September 2021, UNICEF tallied 131 million pre-tertiary students from 11 countries who had been trying to learn at home for at least three quarters of the time that they would normally have been in school. Of that number, 66 million came from just two countries where face-to-face classes were almost completely nixed.

According to De Guzman (2021), during the initial COVID-19 increase in March 2020—just weeks before the end of the school year—the Philippines ceased in-person classes for its entire cohort of public education students, which UNESCO estimated at 24.9 million at the time. According to the data, there are only 5,000 students in just over 100 public schools who have been allowed to return to class in a two-month trial program, after the 20 months of pandemic prevention measures that reported to be one of the world's longest lockdowns—a tiny portion of the 27 million public school students who are enrolled this year. The Philippines must be one of the few, if not the only, countries that continues to rely heavily on distance learning. Without in-person schooling, life has become a huge experiment (De Guzman, 2021).

In the Philippines, distance learning has been quite implemented over the years. This is an option for students who have special cases such as those with medical condition, working students or maybe parents who preferred that their children will learn at home (home schooling). Although several studies conclude that distance learning is not at par with a face-to-face learning, it is also quite interesting to investigate on the skills that we think really need a very comprehensive explanations from the side of the teachers because of the skills' difficult nature. To mention one, tertiary students for sure will agree that research skill is one of the most tough learning area in their college life.

Research competency is a person's integrative, dynamic feature, characterized by the integration of psychological, scientific-pedagogical, and practical preparation for diagnostic-analytical and design activities, research implementation, and the use of research findings in their practical work. It is also characterized as an activity that ensures the learning of the necessary abilities for creative inquiry, culminating in his own problem-solving solution (IGI Global) (2021). Furthermore, research competence has an integrated personality profile, according to Shashkin and Bagachuk (2006), which includes the presence of methodological knowledge, research technology, recognition, and readiness to employ them in professional activities, as well as a consistent motivation. Thus it is not a superficial knowledge that can be easily transmitted by simple lectures and presentations, it needs consistency from the teachers and perseverance among the students.

Sismondo (2020)'s study in relation to this skill, wanted to find out the level of competencies of his students in research. He utilized quantitative research participated by the 63 students. The findings showed that the students' competencies in research was satisfactory. Hence, the competencies of the grade 12-students in research need to be improved. More so, Davidson and Palermo (2015) revealed in their study that the teaching and learning strategies increased self-perceived competence in all of the specific research skills assessed, however, these increases were small often representing an increase of 1 point in the 10-point scale. The unit also resulted in small improvements in self-perceived competence in several broader skills including information gathering and handling, information evaluation, ability to work independently, and critical thinking. There were no reported changes in self-perceived communication, literacy, numeracy, project management, teamwork, or problem-solving skills. There were also no changes in attitudes towards research following completion of the unit.

Research competence among students is not a noble issue in the field of research. As previously discussed, several studies made mentioned that students' research competence level is still satisfactory but it is also good to note that teaching strategies can help develop this competence. However, these studies were conducted during the pre-COVID period with a face-to-face educational set-up. That is why, the researchers were moved to conduct this study, to investigate on the research competence among social sciences students who are also conducting their researches during the pandemic.

Research Questions

This study sought to answer the following questions:

- What is the over-all self-perceived research competence among social sciences students during the COVID-19 pandemic?
- What is the self-perceived research competence among social sciences students during the COVID-19 pandemic in terms of the research competence components:
 - cognitive
 - active
 - value-based?

Review of related literature and studies

The COVID-19 pandemic has changed the method of delivery of the usual or traditional face-to-face classes in many schools in the country, resulting in the use of technology as a substitute where in-person classes are not yet allowed. This paradigm shift in education has led the learners to stay at home and learn to use different educational platforms that became the official communication channels for both teachers and learners. Department of Education, United States (2021) emphasized that despite the valiant efforts of teachers, staff, and school officials, many of whom designed online lessons, remote-teaching plans, and real measures to address students' basic requirements, significant obstacles still remained. Many kids have had to learn in front of screens at home and in other

settings for the past year as a result of illness, loss, and economic difficulty caused by the global pandemic. 9 Despite the valiant efforts of teachers, staff, and school officials, many of whom designed online lessons, remote-teaching plans, and real measures to address students' basic requirements, significant obstacles remained. Department of Education, United States (2021).

According to Chang-Richards et al. (2013) the process of teaching and learning of different schools have changed because of the crisis. In this relation, school administrators need be resilient in their approaches in times when there are disasters and crises – this may be man-made and or natural – and look for new approaches necessary to pursue the different activities related to teaching and learning. As a result of the global health crisis, one developing reality is the migration to online learning modalities to reduce the risk of face-to-face engagement. According to Dayagbil et al. (2021) universities are being compelled to transition from face-to-face delivery to online delivery as a result of the pandemic. During school lockdowns in the Philippines, most colleges, including those in the Mindanao region, have turned to online learning. However, this abrupt shift has created issues, particularly for students who do not have access to technology. People are turning to the internet as an alternative to learning since the commencement of the COVID-19 pandemic. As a result, a division has emerged between those who have and who do not have access. Due to the need of internet access, teachers and students have found it difficult to maintain academic interest.

According to Borzone et al. (2017) academic self-efficacy is a characteristic to consider in the context of higher education since it reflects students' future aspirations based on their abilities, such as achievement motivation, scholarship access, academic success, or academic persistence. However, Abreu (2020), emphasized that in this time of confinement, when we have quickly transitioned from face-to-face teaching to remote emergency teaching, it was critical to assess whether this improvised change would affect university students' expectations of perceived self-efficacy to achieve academic success, given that students were not prepared. It is not surprising to know that the pandemic has negatively affected students in terms of their perception on their performance at school. They might think that the online modality is really different from their usual way of learning from their teachers inside the classroom

In contrast, Arrebola et al. (2020) emphasized that perceived academic self-efficacy in the academic environment and university student performance are elements that are positively associated. According to Colom (2012) and Ahmadi (2020), Iranian students' self-perceptions of their own capacity and competence to complete a specific activity are highly related to academic achievement. A later study validated the impact of academic self-efficacy and emotions on university students' academic success. As a result, larger levels of positive emotionality were linked to greater achievement (De la Fuente et al., 2019).

Other than the students' perceptions of their academic success, it's also relevant to look into how they viewed their competence in a certain activity, such as conducting research. According to Lukashenko (2011), research competence is a willingness and ability to solve research and creative problems autonomously,

possession of research technology, acknowledgment of the significance of research abilities, and readiness to apply them in professional activities are all examples of an inherent characteristic of a person. It is based on analytical and research abilities. Furthermore, he distinguishes between executive and scientific research competencies, which he believes are the essence of research competency.

According to Yaroshenko (2019), an examination of literary sources reveals that researchers are paying more attention to the theoretical and practical aspects of university scientific activity at both the personal and institutional levels, but that higher education students' research activities, the organization of scientific work at the university as a whole, and the development of research competence of scientific-pedagogic workers receive less attention. With this in mind, and with the academic and scientific staff's professional position in mind, we concentrated on expanding the academic and scientific staff's research competency by conducting a scientific search to substantiate its importance and component content. She further said that the component structure of the researched phenomena is traceable in the proposed definition of a scientific and pedagogical worker's research competence, which is represented by cognitive, active, and useful components. The cognitive component includes scientific research methodology, types, methods, and tools of research, as well as scientific field knowledge, which the scientific and pedagogical worker uses to conduct an investigation.

The cognitive component includes the ability to assess and evaluate analysis of data, as well as the ability to apply knowledge that together make up the cognitive component when performing various studies (fundamental, applied, practical developments, mono disciplinary, complex, individual, collective, etc.); the ability to experiment, collect and process, organize and present scientific results in accordance with academic writing standards; the ability to plan scientific work, to carry out qualitative and quantitative processing of the results. The value-based component of a scientific and pedagogical worker's research competence, on the other hand, is defined by an awareness of the personal significance of scientific activity, its role in professional activity; ethical relationships manifested in research activities with other researchers, compliance with academic integrity principles, and tolerance of other scientists' thought and research. The interconnected components suggest that research competence is not natural, but rather a personal attribute gained through training and education, and that its growth has a scientific and applied value.

Methodology

This quantitative-descriptive research primarily aims to know the research competence of the tertiary social sciences students who are enrolled and conducted their research in the midst of pandemic. The 169 respondents were purposively chosen who manifested the characteristics such as being part of the their research class, conducting their study during the time of pandemic, and belonged to the social sciences course in one of the Universities of Mindanao region in the Philippines. A validated survey-checklist composed on the different research skills categorized according to the research components of Yaroshenko (2019) served as the instrument of the study. Using a 5-point likert scale, the

respondents answered the survey-checklist based on their perceptions considering how they learned, practiced, and applied the research skills during the time when they are conducting their studies.

Gathering of the data was done through online due to the restrictions implemented by the school, hence, the research instrument was in the Google form and was sent to the respondents. A prior online orientation was also conducted to inform the respondents on the salient details of the research such as its objectives, methodologies, the scope of their participation, the confidentiality of their identity and responses and other related rights and privileges. Further, the publication of the results was also given consent by the respondents which they agreed as stated in the instrument. After the allotted time given to respond to the instrument, the data were encoded and tabulated statistically following the rubric as indicated in table 1 below:

Table 1
Interpretation of Respondents' Research Competence

Mean	Competence Level	Interpretation
4.21-5.00	Very high	Highly Competent
3.41-4.20	High	Competent
2.61-3.40	Average	Moderately Competent
1.81-2.60	Low	Less competent
1.00-1.8-	Very Low	Not Competent

Results and Discussion

On the over-all self-perceived research competence among social sciences students during the COVID-19 pandemic

Table 2. below presents the over-all self-perceived research competence among social sciences students during the COVID-19 pandemic. The 169 social sciences students got a mean of 4.393 in their self-perceived research competence. The data reveals that the respondents perception on their research competence is very high which is described as highly competent. It can be gleaned from the table that among the 16 research skills categorized in the Cognitive Component, almost all skills were rated by the respondents with very high level of competence which means that they perceived themselves as highly competent in those skills except in the presentation of the data gathered in a clear and unambiguous manner (tables, figures, graphs, etc.), where they only rated themselves with a high competence. However, in general, the respondents manifested that they are highly competent in terms of their cognitive component in conducting their researches.

Kazan's (2015) study bears the same result in which it was found out that the critical level of research competence development was shown by 20% of students, admissible – 36.7% of students, and optimum – 43.3% of students. Moreover, the optimum and admissible levels of research competence development was shown by 90% of students that testifies to the high level of students' research work organization in the university at training sessions of mathematical disciplines and a quite high quality of research training of future experts. Gomez & Panaligan

(2013) also revealed in their study that the respondents showed that they are highly competent in terms of grammar and sentence construction with weighted mean of 4.55. They considered themselves as competent in communication skills in writing the conduct of research data gathering, interviews with a weighted mean of 4.36. This means that the respondents are confident in their writing and communications skill as they are being practiced it in their teaching profession. In addition, a training for their writing development is highly recommended since they are not in the field of language.

Table 2
Self-perceived research competence among social sciences students during the COVID-19 pandemic in terms of the cognitive components

Cognitive Components	Mean	Level	Interpretation
1.Follow Research Paper Format	4.462	Very High	Highly Competent
2.Observe Correct Writing Style, Grammar and Use of Language.	4.462	Very High	Highly Competent
3.Utilize Appropriate Transitory Elements to Establish Coherence and Smooth Flow of Ideas.	4.369	Very High	Highly Competent
4.Write a Research Title	4.439	Very High	Highly Competent
5.Write an Appropriate Introduction	4.450	Very High	Highly Competent
6.State Research Questions	4.385	Very High	Highly Competent
7.Conceptualize Relevant and Comprehensive Research Literature	4.302	Very High	Highly Competent
8.Cite Sources Of Literature Review Using Standard Styles(APA, MLA Or Chicago Manual Of Style)	4.408	Very High	Highly Competent
9.Establish Research Gap in Current Situations	4.284	Very High	Highly Competent
10.Formulate Theoretical / Conceptual Paradigm	4.254	Very High	Highly Competent
11.Formulate Hypothesis	4.290	Very High	Highly Competent
12.Indicate Scope and Delimitation of Study	4.556	Very High	Highly Competent
13.utilize appropriate research design	4.402	Very High	Highly Competent
14.present the data gathered in a clear and unambiguous manner (tables, figures, graphs, etc.)	4.420	High	Competent
15.correlate literature to affirm results	4.349	Very High	Highly Competent
16.present conclusions that reflect the objectives, results and validate the theory used	4.373	Very High	Highly Competent
Over-all Mean on Cognitive Components	4.388	Very High	Highly Competent

1.00-1.80=not competent, 1.81-2.60=less competent, 2.61-3.40=moderately competent, 3.41-4.20=competent, 4.21-5.00=highly competent

Table 3. below shows research competence among social sciences students during the COVID-19 pandemic in terms of the active components. The data tell us that the 169 social sciences students perceived themselves as very competent in terms of applying communication skills (in writing and the conduct of research data gathering, interviews, etc.), collecting data using appropriate instruments, applying data entry (coding and cleaning), applying statistical tools / treatment to analyze data, and synthesizing results of the findings. While in terms of applying sampling procedure, establishing the validity and reliability of the questionnaire and interpreting/ analyzing the results, they see themselves with high level or competent. Altogether, they got a mean of 4.373 which exhibited that they have a very high level of research competence or they perceived themselves as highly competent in terms of the active component in conducting their research.

Similar result was also noted in the research conducted by Sismondo (2020). Although generally, the respondents of his study were described as having a satisfactory level of research competence, it 63 Senior High school students manifested very satisfactory competence in terms of designing a research that is useful, writing an acceptable research problem, describing background of specific research, stating research questions or objectives, and indicating scope and delimitations of study. Evidently, all the research skills rated belonged to the cognitive component as also being evaluated in this study. Moreover, active component of research competence complements with the skills of students of using technology. As emphasized by Saavedra (2018), technology positively influenced the writing skills of students. Even in this modern times of conducting research, data are coded and analysed through the application of technology

Table 3
Self-perceived research competence among social sciences students during the COVID-19 pandemic in terms of the active components

Active Components	Mean	Level	Interpretation
1. Apply communication skills (in writing and the conduct of research data gathering, interviews, etc.)	4.444	Very High	Very Competent
2. Collect data using appropriate instruments	4.479	Very High	Very Competent
3. Apply data entry (coding and cleaning)	4.237	Very High	Very Competent
4. Apply sampling procedure	4.42	High	Competent
5. Establish the validity and reliability of the questionnaire	4.42	High	Competent
6. Apply statistical tools / treatment to analyze data	4.314	Very High	Very Competent
7. Interpret/ analyze the results	4.42	High	Competent
8. Synthesize results of the findings	4.249	Very High	Very Competent
Over-all Mean for Active Components	4.373	Very High	Very Competent

1.00-1.80=not competent, 1.81-2.60=less competent, 2.61-3.40=moderately competent, 3.41-4.20=competent, 4.21-5.00=highly competent Table 4. below presents the self-perceived research competence among social sciences students during the COVID-19 pandemic in terms of the Value-based components. The social sciences tertiary students unanimously rated themselves with a very high level of research competence in terms of the value-based components where they got a mean of 4.454. Based on their perception, they are very competent in following ethical standards in writing related literature, citing benefits and beneficiaries of study, formulating recommendations to address the research problem and concerns found in the study and in determining research relevance and usefulness to one's discipline. It means that in general, the respondents believed that they are highly competent in the value-based component in making their research. This result is supported by the ideas of Taylor (2009) as cited in the study of Davidson & Palermo (2015) nutrition students that has shown the enjoyment and development of research skills through experiencing research itself.

Table 4
Self-perceived research competence among social sciences students during the COVID-19 pandemic in terms of the value-based components

Value-based Components	Mean	Level	Interpretation
1. Follow Ethical Standards in Writing Related Literature	4.414	Very High	Very Competent
2. Cite Benefits and Beneficiaries of Study	4.574	Very High	Very Competent
3. Formulate Recommendations to Address the Research Problem and Concerns Found in the Study	4.450	Very High	Very Competent
4. Determine Research Relevance and Usefulness to One's Discipline	4.379	Very High	Very Competent
Over-all Mean for Value-based Components	4.454	Very High	Very Competent

1.00-1.80=not competent, 1.81-2.60=less competent, 2.61-3.40=moderately competent, 3.41-4.20=competent, 4.21-5.00=highly competent

Conclusion and Recommendation

For many students, conducting research may be one of the hardest requirements which they encountered in their college life. In doing research, it doesn't only required cognitive, active and value-based characteristics but even financial aspect matters from the research conception until the presentation of the findings. It a skill that is hard to acquire despite of the face-to-face and explicit method of teaching it. However, this study had made a very significant findings even the fact that the respondents have conducted their researches during the time of pandemic, when everybody was experiencing challenges battling with the COVID-19 virus. This study found out that the 169 social sciences students still manifested positive perception in terms of their research competence. They believed that they basically have a very high level of research competence in terms

of cognitive, active and value-based components. They perceived themselves as highly competent in their research skills. This findings are good to note that despite of the many problems brought by the pandemic to the academic life of many students, they look at things positively even the hardest challenge of being a graduating student. As emphasized in the study of Kazan et. al (2015), the importance to include research tasks in the content of students' educational activity in a higher education institution has been emphasized over different years by a number of scientists and teachers. Hence, this study recommends that educators may continue to use strategies in teaching research that is very appropriate to the situation or context where the students are.

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