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A STUDY OF TEACHING TECHNIQUE TOWARDS TALENT AND TEACHING STYLES

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ABSTRACT

A demographic examination separated by a teaching position provides a possible insight into the results of this study. These demographics are shown separately by teaching positions. Among elementary science teachers, primary non-science teachers and high school nonscience teachers, the highest proportion of evangelicals and weekly church participants is seen. These groups were also less supportive of incorporating scientific ideas into the curriculum. Similar results were seen for those who identified themselves as Republicans and Conservatives. Among the same three groups, the highest proportions for these political factors were seen. It is plausible that views on religion and politics can be linked to the individual's chosen careers. The population of the area in which the educator lives, however, is not likely to be directly related to the career path. The survey revealed that larger proportions of primary and secondary school teachers lived in rural areas. There were largely unexpected results from the aspects of this study that addressed content knowledge. These results are visible. Secondary school science teachers were noticeably higher in the group of people who had taken or more science classes. Compared to the other SSI, the self-reported understanding of

development was higher for all groups. Most secondary and secondary school teachers described their understanding of evolution as above average. For the two secondary groups, this was the highest, but five of the seven teaching posts were over 50 percent. For high school teachers from stem cell research, the only group that felt that they mostly had an above average understanding (52.5 percent).

Keywords: demographic, examination, Teaching Technique, talent.

INTRODUCTION

Socio-scientific education is an active approach to learning that places scientific content in a social context which provides motivation and the student's own learning skills. Many researchers today believe modern scientific literacy can be achieved through socio-scientific questions and advocate the fact that socio-scientific issues are essential ingredients for modern classrooms in science and technology. Therefore, it is necessary to inform, channel school children into learning, and to ensure that they discuss socio-scientific issues. Unless students are taught about it, students will ignore the influence of science and technology on social life. It is the responsibility of teachers to remove these constraints, help students to prepare for life and to guide them. Acquiring the desired results by applying socio-scientific questions to science and technology, generating an effective teaching-learning process, being able to reflect what has been learned in practise and being able to reflect the teaching process can only be achieved by determining a teacher's perception of their skills in using social education. Within this scope of study, it aims to explore the views of candidates in science and classroom teaching on socio- scientific issues and their skills in using socio-scientific questions in science and technology education. The socio-scientific topics offer a way to explore the nature of science, connect students and science literacy, the interdependence of the movement of science and society and democratic science. Students are complex in deciding socio-scientific issues and assessing inconsistent scientific information and in emphasizing personal experiences and values. "Curricula relating to social, tentative and empirical aspects of science, Sadler suggested, would be particularly useful for students as they deal with socio-scientific questions." Their personal opinions and their scientific knowledge, but also the assumptions of the nature of science, how data are interpreted and the interactions of science and society, influenced and assessed contradictory.

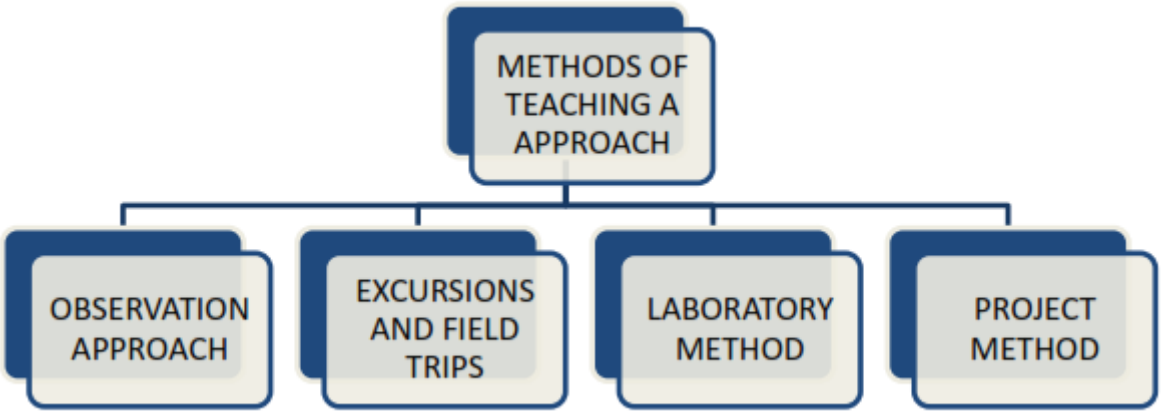
For instance, several reasons that influence the views of science teachers of a number of SSIs concern their understanding of nature and their understanding of validity and the importance of many SSIs in science education. Some authors have called for more attention to such perceptions and understanding because they help to understand the value and respect of many SSIs in science schools by science teachers. Such a research on these perceptions is important, especially to show how science teachers understand science in an epistemological way and its role in people's lives. It also offers a

considerable understanding of the scientific strategies of science teachers. Additionally, other reasons that influenced the opinions of scientific teachers in many SSIs relate to their world views, including their world views of religion, culture and society. In their discussion of people's worldview, people's worldviews have identified as a combination of principles and beliefs which people acquire in order to understand their surroundings. Moreover, research into the world views of teachers found that the cultural beliefs, values and religious beliefs of people contribute to their view of science as a human effort. The number of studies focused on socio-scientific decision-making is gradually increasing. Students should learn how to negotiate, as future citizens of a society, and make reasonable decisions on these issues. Scholarship papers emphasise that teaching science-related societal questions is one of the objectives of scientific education to educate scientists. Recent scientific reforms highlight the need for citizenship education so that scientifically connected social issues that are socio-scientific should be addressed in the science classroom. In science education curricula, socio-scientific questions should be considered pedagogically. Researchers of science education emphasized the link between science, technology and society (STS) education that while theoretical and pedagogical aspects of SSI were based on STS education, they are not the same and have unique approaches. They are conceptually connected and relate science to societal questions.

However, SSI is distinguished from STS by emphasizing moral and ethical development and the development of character and virtue that SSI is an educational strategy with clear instructional purposes as well as an environment of learning science. From a theoretical and pedagogical point of view, science education researchers examined the socio-scientific issues to explore students' reasons in their decisions. As a new approach, SSI has been accepted to be more holistic than the STS approach in order to teach controversial issues. In light of this, this study describes a study of the reasoning of preservation science teachers (PSTs), regarding the practical aspects of SSI decision-making. The following sections provided detailed information on SSI, informal reasoning and socio-scientific reasoning. Within the context of science, reasoning has historically referred to formal logic and mathematical thinking. Formal reasoning has usually been associated with well-defined problems, for which individuals have been given premises and are required to assess if a conclusion is right or wrong argues that informal reasoning proceedings are not generated when the problem is well defined as in formal reasoning, since "informal reasoning is important when information is less accessible or where the problem. Formal reasoning is not well suited to unstructured problems because they have no clear premises or conclusions He stressed that the ill-structured problems are mostly faced in their everyday lives, with decisions and choices, and stated that "just as scientists employ informal reasoning to learn about the world, ordinary people rely on informal reasoning to give clarity to the controversial decisions that they face." This is when people are asked to take positions on controversial issues with informal reasons. In SSI research, the findings of informal thinking patterns for students are mixed based on emotional, social, scientific, economic, ecological or human-based considerations. In other words, people in the process of negotiation and resolution of socio-scientific

issues may show different patterns of informal reasoning. Patron described, for example, four different patterns of reasoning as social, ecological, economic and practical on the basis of the type of argument put forward for or against the issue of a local road design.

Figure 1: *Methods of teaching SSI*



REVIEW OF LITERATURE

Kolsto et al (2021) explained that worldwide rapid development of education and technology has led to various socio-scientific issues in which social dilemmas are closely linked to science. Due to its rapid scientific and technological changes in recent years and the resulting social dilemmas, we use this study. In government, for instance, the building of a park dam was proposed in order to ensure adequate water supply for local communities. However, it was estimated that the dam would eliminate about low forest land in the park and cause habitat loss for many animals. Conservationists argue that one of the most abundant forest regions can be lost without proper study of the potential environmental impacts of the dam. The conflict between farmers is another SSI. Wild elephants are often displaced and drilled as farmers clear forests for the production of homes and plant crops, particularly in times of drought or food shortages in forested areas. With elephants leaving the forest in search of grown food sources, conflicts between elephants and humans, such as attacks on tourists in the nearby National Park have become more prevalent. The common dilemma between the two is human need vs. resource conservation. The lack of understanding of the interactions between social and scientific needs can lead to fear, anger and distrust of the scientific community.

Vipoosanapat et al (2021), as defined above, SSI educational frameworks build on the idea that a strong societal problem with science links should be used as a background for instruction. They suggest that students should be provided with the opportunity to explicitly consider the scientific evidence, but also the relevant social effects, and that diverse opinions on this issue should be encouraged. It emphasizes educational activities involving collaborative discourse and argument. This

is because participation in collaborative discourses and arguments is considered crucial to the preparation of students for active and responsible citizenship. The analysis and construction in relation to available evidence of different interpretations and claims, for example, reflects the function of argument in a scientific investigation. Such work can foster enhanced NOS understanding. Collaborators SSI discourse also offers students the opportunity to deal with these issues personally, to look at their own and other values and views with the overall goal of empowering students. According to Sadler, science education should encourage students to have a feeling about these matters and to see themselves as legitimate participants in social dialogues, in particular science. This involves recognizing the students' personal views on the issues.

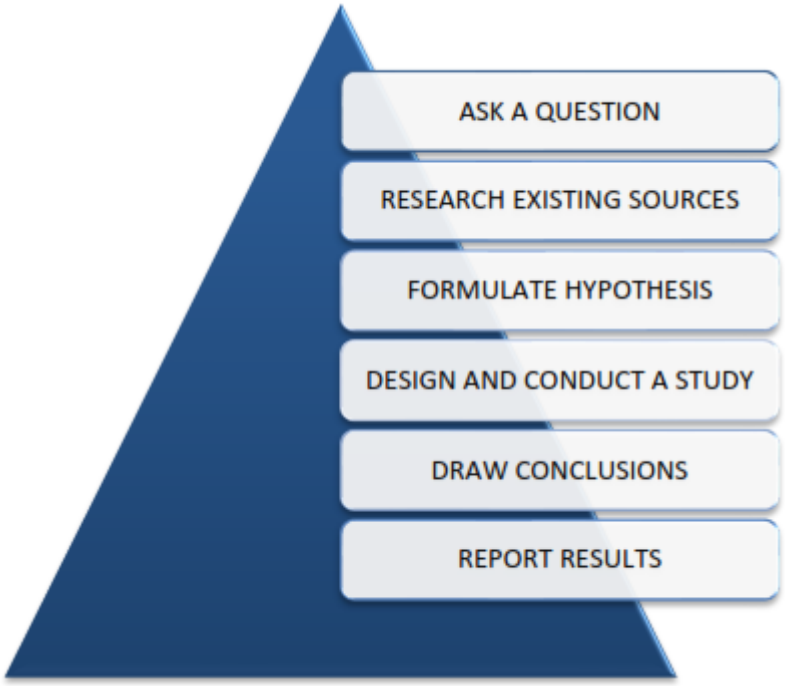
Reis & Galvao et al (2021) studied factors that affect the teaching of one protege teacher's controversial SSI. They examined these factors using a whole year case study procedure. This teacher was chosen from a group of teachers who had previous studies with the researchers on account of their experience in teaching and managing their scientific classroom. The scientists observed the teacher during classes. Each class lasted for minutes and aimed to teach controversial preprogrammed subjects. The teachers have also been interviewed several times during the year. Christina, the study participant, revealed many opinions on these issues. She emphasized, for example, that these issues are too complex and that the teachers need adequate knowledge that includes the nature of these issues and how to teach them through not only technical procedures. She revealed and emphasized that science should be humanely taught to address issues such as the hierarchy of values, social aspects and personal perceptions. She also stressed that participating in decision-making processes, particularly in relation to technology and science, requires a sufficient understanding of these issues and how these matters affect society. She also showed different views of science when she believed that scientists do not focus on the values and morality of people when conducting science as their ambition sometimes becomes more a priority than ethics.

Christina, et al (2021), showed strong positions and an understanding of these matters together with her NOS understanding and her conviction of how important these issues are to articulate and teach in the scientific classroom helped her overcome many barriers in her effort to teach these questions. There are weaknesses and strengths in this study. One of her weaknesses was that she only recruited one teacher who would not disclose more legitimate and widespread findings. The authors did not also try to investigate which aspects of Christina's positive understanding of the importance of these issues in the science curriculum contributed most to the NOS. One of the most valuable strengths of this study, however, is the methodology used in a case study and the long time that allowed the teachers to debate their opinions more in depth.

SPECIFIC ACTIVITIES OF SSI THROUGH TEACHING

There are also specific SSI activities and unit's available (second essential feature of peripheral influences). Although most teachers may not be ideally placed to produce SSI materials, they do bring a great deal of expertise in relation to their students' specific needs, concerns and talents. It is important to ensure that curricula are flexible enough for teachers to change their teaching environments (third essential feature of peripheral influences). The local community in which SSI education is conducted has further influences. Teachers, students and administrators need to familiarize themselves with local issues and find out about them (fourth essential feature of peripheral influences). Moreover, if community employers consider a local issue or SSI subject to be controversial, they can pressure teachers or administrators to discourage SSI education. Therefore, teachers and school staff will have to develop strategies for negotiating these issues. For example, teachers and school workers (particularly managers) can arrange meetings with parents and/or community employers to inform them and explain why students need to learn this (fifth essential feature of peripheral influences). All reforms in science education exist within the context of state and national policy. The general move towards student assessment, teacher accountability and standardized international curricula is likely to have an impact on SSI-based instruction. Teachers may be reluctant to develop or teach the summer volume of SSI-based lessons if they perceive that the content of lessons is too far from the study goals on which their evaluation was based. Therefore, curriculum developers and teachers need to consider how SSI based lessons link with governmental or national targets to promote their implementation in the classroom (sixth essential feature of peripheral influences). A number of aspects should be taken into account to effectively implement SSI-based instruction in the classroom. The curriculum itself should be centered on a social science issue and offer students scaffolds for higher order thinking processes. The curriculum should also enable students to use what they have learned to reflect on what they have learnt in new situations. The successful implementation of SSI also depends on a number of teacher and classroom characteristics. Learners should be able to engage in experiences such as argumentation and teachers may need to rethink their classrooms roles (such as shifting from the sole-authority of the classroom to a facilitator). The environment in the classroom must be supportive, collaborative and respectful. Peripheral influences, including the school environment, district and community expectations, as well as state standards and domestic policy will also have an important influence on how teachers and students can contend with controversial issues in classrooms.

FIGURE 3: *specific activities of SSI*



The new framework for science education and the Next Generation Science Standards emphasise the importance of the development of science literacy and scientific practise by students. In order for these objectives to be achieved, students need to be able to conduct scientific investigations, analyse and explain data, use evidence to support claims and participate in scientific discussions. Teachers must be incorporated into a context in order to authentically incorporate these processes into their classroom. For this work SSI provides ideal contexts. The research framework we have presented is not intended as a step-by-step guide for teachers; rather, it is a template that provides the elements required for SSI-based teaching. Practitioners can use this model to include essential features when using SSI. Curriculum designers can use this framework to effectively integrate social issues with the content of science. This framework can be used by professional developers and administrators to help teachers implement SSI-based instructions. Finally, researchers could use this framework for the conceptualization and research of SSI-based instruction features. The framework that we have presented can be used by a variety of stakeholders to facilitate the implementation of SSI training in the classroom, and help students to develop scientific literacy and to engage in scientific practises.

This aspect of science education was talked about by various scholars and how these problems should be taught in ways that teachers can meet the complexities involved. In recent years, the increasing interest in how science influences and is influenced by other aspects such as society and technology has become more important. Things like evolution, cloning, genetic engineering and many others, for example, led to differing interpretations of how such questions should be experienced and addressed

in many respects with the complexity involved. Individuals decide whether nuclear power plants should be constructed or genetically modified foods banned or permitted. These issues usually lead to discussions, including contradictory ideas, as there is no consensus among individuals. Different and contrary ideas make them controversial, controversial and open to multiple solutions. These are called "complex, open-ended, often controversial dilemmas without definite answers" as socio-scientific issues that define the SSI. Arguments valid, but contrary, can be made from several perspectives in response to socio scientific dilemmas." These questions can be negotiated and addressed by informal reasoning, "involving position generation and evaluation in response to complex issues that lack clear solutions." Individuals should evaluate and make sound and informed decisions on these issues critically. They should develop the skills needed to analyse and evaluate the thinking that enables them to analyse the impact of these issues on different stakeholders.

CONCLUSION

Less than half (35.5%) of educators would say that they regarded evolution as a credible field of science and less than a third (22%) would describe evolution as accurate and impartial. Most participants (50.1%) did not support or have undecided embryo use, but most (47.6%) felt that stem cell research provided significant opportunities. Almost two-thirds (54.0%) supported climate science, but only 24.7% were willing to describe the evidence as accurate and impartial. Fortunately, support for scientific evidence among secondary science teachers was higher, but there was some overall improvement in support of science behind these topics. A particularly large percentage of educators at some point seemed willing to accept the science of climate change and SCR, but had not yet concluded. A complete summary of the scientific support There were largely unexpected results from the aspects of this study that addressed content knowledge. These results are visible. Secondary school science teachers were noticeably higher in the group of people who had taken or more science classes. Compared to the other SSI, the self reported understanding of Development was higher for all groups. Most secondary and secondary school teachers described their understanding of evolution as above average. For the two secondary groups, this was the highest, but five of the seven teaching posts were over 50 percent. For high school teachers from stem cell research, the only group that felt that they mostly had an above average understanding (52.5 percent).

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