
CHAPTER 5.

CONCLUSION AND INTERPRETATION

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First second and third chapter comprised of Introduction, Review of Related Literature and Methodology used in the study. The following fifth chapter deals with Conclusion and Interpretation after the analysis of data gathered which includes findings, scope for further studies, educational implications and conclusion.

5.1. Findings

Interpretation of data is an important part of research as it fulfils the main purpose of the study. In the present study “A Study of Alternative Conceptions in Biology among 12th Class Students”, data was collected through Two Tier Diagnostic Test and an unstructured interview schedule and analyzed qualitatively. Misconception and alternative conceptions were found more in the concepts like sexual reproduction in humans and reproductive health. There were few misconceptions in the sexual reproduction in flowering plants, fruits and seeds. However there were very less misconception in the concepts like asexual reproduction.

Sources of alternative conceptions are the possible origins from where unique and different types of concepts arrive in learner’s mind. In the present study, sources of alternative conceptions or misconceptions were diagnosed as lack of content knowledge, language barrier, teacher and social interactions, textbook, naive concepts and daily life experiences.

5.2. Educational implications

Science education has always been prone to lot of misconceptions due to many reasons like its abstract nature, conventional methods of teaching are followed till now, no and low scope for application and experimentation. Hence

the study tried to find out some of the areas in biology of 12 class for alternative conception or misconception. This will help in the field of education in the following ways:

- Teachers may consider teaching reproduction in biology in a more familiar way and indifferent with other topics of biology.
- Textbook of biology should be reviewed for concepts like development of primary oocyte, making it more clear and easy to understand.
- Language should be considered as a vital element while teaching biology, making each term understandable to every learner.
- Science should be taught in such a way that students may connect them with their daily life experience.
- Students should be asked for doubts, and their alternative conceptions should be checked by teacher and rectified directly or indirectly if needed.
- Alternative conceptions among students should be encouraged as it helps their ability to think and explain.

5.3. Scope for further researches

A research is done among a particular population, on a given context, in a predefined time period. This leaves a scope for further research in the same field of research. Some of them are mentioned as follows:

- There is less study done about the concern of teachers towards students' misconception or alternative conception, leaving a scope for research.
- The study done was confined to the 12th class students of CBSE affiliated schools, which can be also done with different class students of different state board schools.

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- Study tried to find out the misconception among students, which can also be studied on student-teachers or teachers.
 - The study was done using a qualitative design, hence making space for carrying out similar research using quantitative design.
 - Study was done including samples from only Nuapada district of Odisha, hence same study can be stretched to other parts of Odisha and India.
 - Due to unavailability to samples in physical classrooms, caused due to covid-19 pandemic, teaching and intervention to minimize the misconception and alternative conception was not the focus of the study. Researches can be done showing the intervention for the same.

5.4 Conclusion

Many a time teachers and facilitators fail to understand students thinking and understanding before his/her alternative conception, leading to a negative impression for child, poor teaching learning environment and meaningless classroom approaches. If every teacher started understanding the cause and source of alternative conception among student, the purpose of learning would definitely improve. Understanding students misconceptions and alternative conceptions will also give a more child centric approach to teaching learning process.