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An Investigation of Students' Learning Difficulties in the Science Subject at the Secondary Level in District Panjgur

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Abstract

The study has investigated the different internal (personal) and external factors that contribute to learning difficulties in the science subject at secondary school students in District Panjgur, Balochistan. In this study, a quantitative research methodology was used, incorporating a descriptive-correlational design. Three hundred fifty-four students from grades 9 and 10 were selected through cluster sampling techniques, including both public and private high school students. The data collection was conducted using a Likert-scale questionnaire, with Cronbach's Alpha of 0.846. Analyzed the data by descriptive statistics and Pearson's correlation, the results indicated that the lack of available resources (Mean = 3.47), the use of traditional teaching methods (Mean = 3.24), and the lack of parental involvement (Mean = 3.13) appeared as the most prominent external factors. Among the internal (personal) factors, prior knowledge occurred as the most significant contributor, with a mean score of 3.18. Additionally, the result of Pearson's correlation was found to be positive between learning difficulties and kinds of factors, including available resources (r=.839, p=.000), home environment (r=.801, p=.000), and cognitive ability (r=.764, p=.000). Based on the result, both null hypotheses were rejected. The findings indicate that challenges in science learning are complex, heavily shaped by the dynamics of both educational and familial contexts. Suggestions focus on increasing parental engagement, upgrading educational resources, updating instructional techniques, and revising assessment processes to promote cognitive growth.

Key Words

Learning Difficulties, Science Education, Internal Factors, External Factors, Secondary Level, Panjgur

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Introduction

Learning's basic idea is to increase the progress of students' potential across kinds of domains, including cognitive, emotional, and physical skills, as well as improve intellectual, emotional, spiritual, and skill intelligence in the new paradigm. Particularly, in the context of science education, the motive is to fully enhance students' cognitive,

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emotional, and physical capabilities within the classroom (Marchuk et al., 2024). Moreover, Babalwa & Newlin (2023) state that learning involves individuals trying to change their behaviour and acquire knowledge, skills, attitudes, and positive values from the materials they study. In education, the process of teaching and learning can be challenging at times. In education, one of the major barriers increases when learners face learning difficulties, which can effectively affect their academic performance. Additionally, learning is an evolving process that arises from an individual's effort to adapt and grow by engaging with their environment, acquiring new experiences, and upgrading their understanding through interaction (Tawfik et al., 2022). Learning within the learning environment emerged from the interaction among students, teachers, and physical resources. Furthermore, the technique of learning has been designed to reinforce the internal learning processes of students, influenced by both internal and external factors. (Fatah et al., 2024).

Hurdles in analyzing, comprehending, or applying concepts efficiently represent learning difficulties. Daily challenges and learning difficulties can impede students' ability to reach their learning objectives and academic success. The learning process is interrupted by certain barriers resulting from learning difficulties; generally, students are not conscious of them. Such hurdles can occur from different factors, including sociological effects, psychological conditions, and physiological limitations, all of which shape the entire learning experience (Simbolon et al., 2022). Sociological factors indicate the attributes of the social environment that can affect learning and educational performance. In addition, social structures, institutions, interactions, and cultural norms that build an individual's experiences within educational settings are included in sociological factors. Psychological factors related to mental and emotional processes that impact learning. These factors are attitudes, beliefs, motivations, emotions, self-esteem, anxiety, and cognitive abilities such as memory, attention, and critical thinking skills. Physiological factors such as neurological disorders, sensory impairments, chronic illness, fatigue, nutritional deficiencies, or any other bodily limitations affect learning abilities. In the current research, we did not examine physiological factors.

Moreover, through observation and experimentation, the systematic study of the natural world is science, and the construction of theories and laws to understand the fundamental principles leading to different phenomena. It is divided into the following branches, each of which has its own importance, including biology, chemistry, physics, astronomy, and earth sciences. Moreover, science is significant for handling all the world's problems, including starvation, climate change, environmental degradation, energy shortage, and public health crises. Through evidence-based research and research-based policymaking, science supplies the base for renewable solutions to complex issues, protecting the security of current and future generations (National Academies of Sciences, Engineering, & Medicine, 2017). Scientific methods are used to build observations, form hypotheses, perform experiments, and analyse data. Science looks to reveal truths about the universe and expand human knowledge. A community that has built progress in science and technology tends to achieve more progress compared to one that has not (Faize & Dahar, 2011).\

Science education begins in primary schools in Pakistan and is combined with other subjects. In 6th – 8th grade, it is taught as a general science course. In 9th and 10th grade, science education is divided into three disciplines: biology, chemistry, and physics. Additionally, students choose computer science as an elective within the science course. Students pursuing arts subjects are required to study a broader science curriculum. External examinations administered by secondary school boards are taken by students in grades 9 and 10. After completing grade 10, science students typically apply to universities or higher secondary institutions. Some private schools also offer the Cambridge or London University O and A-level curricula (Rauf et al., 2021).

In addition, Panjgur is a district located in the southwestern part of Balochistan province in Pakistan. Panjgur is situated between 25.117°N latitude and 64.083°E longitude. The west of the Panjgur border, Iran is located, Kech

and Awaran districts to the south, Washuk district to the east, and Chagai district to the north. Moreover, the geographic isolation, limited access to educational resources, socioeconomic status, and cultural influences may affect students' learning difficulties in science education. Geographical isolation can restrict the availability of trained teachers, educational resources, and learning materials in District Panjgur. Additionally, the rural nature of Panjgur also causes transportation challenges for students and teachers, probably limiting opportunities for educational development and extracurricular activities.

The students in grades 9th and 10th faced learning difficulties in science subjects because of different factors. Burning factors are a limited approach to quality learning resources and educational facilities in the schools of District Panjgur. Absence of well-equipped laboratories, traditional textbooks, and limited teacher training or workshops contributes to learning difficulties. Moreover, socioeconomic gaps effectively impact students' engagement in science education. Learners belonging to underprivileged families have limited access to educational materials or opportunities for advancing activities outside the school (Cinel, 2022).

Objectives of the Study

The following were the objectives of the study:

1. To measure the internal (personal) factors contributing to learning difficulties in science at the secondary level in District Panjgur.
2. To measure the external factors contributing to learning difficulties in science at the secondary level in District Panjgur.
3. To examine the significant relationship between internal (personal) factors and students' learning difficulties in science.
4. To examine the significant relationship between external factors and students' learning difficulties in science.

Research Questions

1. What are the internal (personal) factors that contribute to learning difficulties in science at the secondary level in District Panjgur?
2. What external factors contribute to learning difficulties in science at the secondary level in District Panjgur?
3. What is the relationship between internal factors and students' learning difficulties in science?
4. What is the relationship between external factors and students' learning difficulties in science?

Research Hypotheses

$H_0$1: There is no significant relationship between internal(personal) factors and students' learning difficulties in science at the secondary level.

$H_0$2: There is no significant relationship between external factors and students' learning difficulties in science at the secondary level.

Literature Review

Learning Difficulties

The learning difficulties refer to the difficulties students face in understanding lessons. These difficulties create barriers in their learning, which may lead to failure or reduced success in reaching their learning objectives. According to the researcher, learning difficulties in science subjects begin due to a combination of internal and external factors. Psychological aspects like interest, motivation, and health are included among internal factors, while external factors are the educational environment, teaching methods, available resources, and family support (Gui & Akuba, 2023). Learning difficulties can impact learners both academically and individually, making it a

complex issue. Different from learning disabilities, which are often linked to neurological disorders, learning difficulties can arise from other factors, such as environmental, social, and psychological effects (Antonis, 2022). According to Winarti (2021), during the learning process, learners encountered difficulties that prevented them from achieving their learning goals, a phenomenon known as learning difficulties.

The identification of these difficulties is mandatory to recognize and represent the issues that students are facing and to find the primary causes. This allows instructors to discover solutions and reduce the probability of similar learning difficulties occurring in the future.

Moreover, Students' low learning outcomes are caused by certain aspects, such as internal and external factors (Afrianis et al., 2022). According to Mazza (2017), learning difficulties in science subjects are affected more by external factors than by the natural abilities of students. Having a significant impact on shaping students' learning experiences, factors such as family environment, socioeconomic status, and lack of motivation. Students from low-income families may suffer because of inadequate access to educational resources, while insufficient parental support can decline motivation and engagement in science subjects.

Internal Factors of Learning Difficulties

The internal (personal) factors that contribute to the learning difficulties in science may include attitude, prior knowledge, and cognitive ability.

Attitude

A positive attitude toward science is boosted significantly by motivation and engagement, whereas a negative attitude leads learners to have limited interest in science subjects. Research shows that academic performance and motivation in science subjects are built on positive attitudes of students towards science. The relation between motivation and attitude toward science concepts is directly proportional (Dere, 2024). However, students' attitudes toward science are greatly influenced by their recognised competence, meaning how skilled they feel in the study. When students consider that their required expertise is limited to succeeding in science, a negative attitude arises, leading to less interest and engagement. This low confidence can create a track where low personal belief brings in reduced effort, a low level of execution, and then withdrawal from learning science subjects (Phil Canlas, 2024).

Prior Knowledge

Better learning occurs with prior knowledge; students link the present ideas with what they already understand. While learners utilize their prior knowledge, they make predictions and form concepts about new topics, which fosters their interest and motivation (Belouiza et al., 2024). However, prior knowledge mostly helps learning new concepts; some studies have shown that it can also hamper the attainment of new information, as extraneous prior knowledge may delay learning (Brod, 2021).

Cognitive Ability

Numerous studies indicated that this cognitive ability significantly influences learning difficulties. These studies examine the correlation between cognitive skills and learners' performance in science; lower cognitive abilities can make it difficult to understand complex scientific concepts (Widyasari & Hermanto, 2022). Cognitive abilities directly affect science literacy, relying on cognitive skills. Whereas developed cognitive abilities are linked with lower learning difficulties, the studies show that these learners can still face learning difficulties in science subjects. The study discovered that even students with high cognitive ability often rely on natural reasoning, leading to false conclusions in scientific problems (Gousopoulos, 2023).

External Factors of Learning Difficulties

External factors, certainly those related to family and school factors, are a significant cause of learning difficulties in science subjects. Family and school factors are the external factors that contribute to learning difficulties in science (Rusli et al., 2023).

Family Factor

Learning engagement increased by positive parent-child relationships within the family environment promotes the formation of brilliant learning habits and provides crucial support (Chen et al., 2023). Moreover, studies have indicated that depression rises among students due to family stress, affecting their academic performance and learning outcomes (Deng, Y., 2022). Family factors that can hinder effective study are parents neglecting their children's education and a busy or noisy environment (Yessa et al., 2022).

Parental Involvement

Parental involvement generates a positive learning atmosphere, which is mandatory for learners with learning difficulties (Ybañez et al., 2024). However, both the scientific inquiry skills and the overall academic performance of students improved through the active involvement of parents in science learning practices, like group inquiry-based tasks (Dignam, 2023). The National Science Teachers Association points out that when parents are involved in an active role, their kids gain greater success as learners, regardless of socioeconomic status or racial background (NSTA).

Home Environment

The students' enthusiasm and ability in science increase with the occurrence of science-related activities and resources at home (Ker et al., 2023). However, introducing science-related activities at home during childhood is crucial for a child's future development and for gaining knowledge in science. Studies show that children who are involved in activities such as experiments, educational science games, or discussions about nature at home build stronger foundations in science concepts (Bae et al., 2023).

Available Resources

Workshops and sessions are applied to improve science learning, but the absence of these can stop both teachers' and learners' ability to stay updated with current scientific advancements and teaching methodologies. This absence of support can lead to traditional teaching practices, which can cause learning difficulties among students (Zhou et al., 2023). Additionally, the lack of essential resources, such as the absence of laboratories or less-equipped laboratories, limits hands-on experiments, resulting in students struggling to fully understand scientific concepts, and this causes lower academic performance. (Novianti et al., 2022).

Teaching Methods

Teachers use unproductive teaching methods, such as limited, clear explanations, traditional teaching methods where teacher-centred classes occur, or expired strategies, and teachers' conceptual misunderstandings can make learning difficult and not interesting (Azahra & Wahyudi, 2024). During the learning process, interaction between learners and tutors is important in the teaching and learning process. The value of this relationship can influence how effectively students learn. Active engagement of the teachers can create a smoother learning experience. In opposition, if there is less interaction and students and teachers are far apart from each other, they may participate less actively in learning. From research, positive teacher–student relationships increase students' academic

engagement and overall interests. Research found that good teacher-student connections lead to high social support, which progresses students' engagement levels (Liu, 2024).

Classroom Environment

By using Internet of Things (IoT) technology, classroom environments can be boosted by supervising conditions and providing data for improvement (Tan et al., 2024). However, for both hands-on and theoretical classes, effective tutoring depends on the materials and resources. Lack of materials or limited access to materials limits the teachers' ability to involve students in class, as reported by educators (Almeida et al., 2023). Learning materials such as interactive whiteboards, digital quizzes, and online discussion platforms aid students in collaborating and sharing ideas more easily. These kinds of classrooms also help with collaborative learning and feedback mechanisms (Kang et al., 2023).

Peers' Interaction

Learners gain knowledge from one another via problem-solving, especially in hard areas such as quantum mechanics, where knowledge is boosted through peer collaboration (Brundage et al., 2022). Moreover, research suggests that collaborative learning plans raised mean scores from 68.05 to 77.29, indicating that higher student engagement can lead to better learning outcomes (Widyasari et al., 2022). Additionally, the study demonstrates that peer interaction learning fosters students' social and academic abilities. Students understand the subject more deeply and foster their group work and communication skills when they teach others (Tzuriel, 2021).

Research Methodology

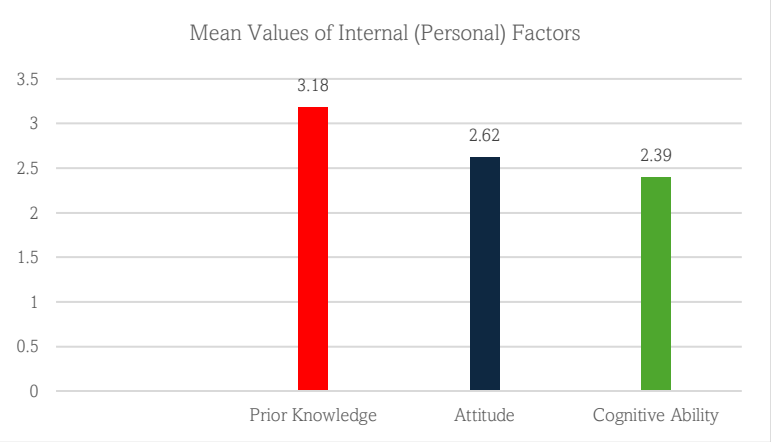
The quantitative research method was employed. This research aimed to find the internal and external factors that cause learning difficulties in the science subject. A descriptive correlation design is a research design that adds elements of descriptive and correlational studies to explore relationships between variables without manipulating them. The population of this study was secondary level (9^{th} & 10^{th}) students of private and public schools in the district of Panjgur. There were 40 government high schools in District Panjgur, from which 22 were boys' schools and 18 were girls' schools in which 2916 students both male and female belonged to the 40 government schools and 767 students were studying in private schools. The total was 3683 secondary-level students in District Panjgur of session 2K22-2K24. With this method, the target population is divided into discrete administrative or geographical units, or "clusters," and a subset of these clusters is chosen at random for data collection. The main goal of cluster sampling is to offer an affordable and efficient means of gathering data, particularly in situations where the target population is spread out geographically or if a comprehensive list of the population is not accessible. We conducted surveys in secondary schools among the different Union Councils of the district Panjgur. The desired UCs were Bonistan, Chitkan, Essai, Gram Kahn, Khudabadan, Sarawaan, Tasp, and Washbood. The sample included both male and female students in the 9^{th} and 10^{th} grades. According to Krejcie & Morgan (1970), for a population of 3,683, the corresponding sample size is approximately 348. I added six more respondents to my research, for a total of 354. The instruments that were used in the present research were a questionnaire to collect data. Cronbach's Alpha was applied through SPSS to ensure the reliability of questionnaires. The value of Cronbach's Alpha was 0.846. The data were analysed using descriptive-inferential statistics, and we used Pearson's correlation to test the hypotheses.

Result

SPSS was used to analyse the collected data, and the frequencies, percentages, mean values, and standard deviation of each statement were calculated. Represented the result in tables and graphical forms.

Figure 1

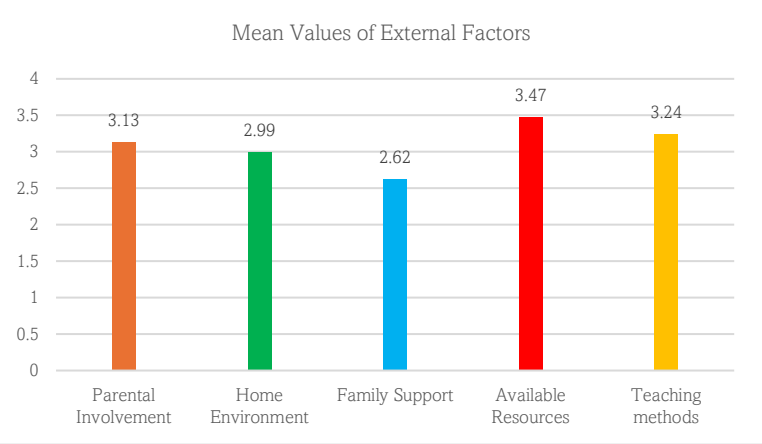
Mean Values of Internal (Personal) Factors



Graph one shows the mean values of internal (personal) factors by which we investigate which of the following variables most contributed to learning difficulties in the science subject at the secondary level in District Panjgur. According to the result, we found that the prior knowledge, with a mean value of 3.18, contributed the most.

Figure 2

Mean Values of External Factors



Graph 2 indicates that the available resources in school, with the highest mean value of 3.47, contributed most to learning difficulties in the science subject at the secondary level in District Panjgur among the variables. After that, the teaching method with 3.24, parental involvement with 3.13, home environment with 2.99, and finally family support with 2.62 contributed to learning difficulties in the science subject in descending order.

Table 1

Relationship between internal(personal) factors and learning difficulties.

Learning Difficulties	Pearson correlation	Learning Difficulties	Prior Knowledge	Attitude	Cognitive Ability
		1	0.37	0.315	0.764
	Sig.(2-tailed)		0.00	0.000	0.000

The table indicates the correlation between learning difficulties and prior knowledge is r = 0.37 with a significance level of 0.03, which is less than 0.05, that $p<0.05$, it also shows the correlation between learning difficulties and

attitude is r=0.315 with a significance level (p=0.000), and the correlation between learning difficulties and cognitive ability is r=0.764 with a significance level (p=0.000). Since p<0.05. Since p< 0.05, indicating that the relationship is statistically significant. Thus, there is a meaningful linear relationship between learning difficulties and prior knowledge, attitude, and cognitive ability.

Table 2

Relationship between external factors (family factors) and learning difficulties.

		Learning Difficulties	Parental Involvement	Home Environment	Family Support
Learning Difficulties	Pearson Correlation	1	0.729	0.801	0.493
	Sig. (2-tailed)		0.000	0.000	0.000

The table indicates that the correlation between learning difficulties and parental involvement is r = 0.729 with a significance level of 0.000, the table also shows that the correlation between learning difficulties and home environment is r=0.801 with a significant level of 0.000, and the correlation between learning difficulties and family support is r=0.493 with a significance level (p=0.000p which are less than 0.05, p<0.05; this indicates that the relationship is statistically significant. Thus, there is a meaningful linear relationship between learning difficulties and parental involvement, home environment, and family support.

Table 3

Relationship between external factors (schools' factors) and learning difficulties.

		Learning Difficulties	Available Resources	Teaching Methods	Classroom Environment	Peers Interaction
Learning Difficulties	Pearson correlation	1	0.839	0.419	0.404	0.358
	Sig. (2-tailed)		0.000	0.000	0.000	0.000

The table indicates the correlation between learning difficulties and available resources is r = 0.839 with a significance level of 0.000, the table also shows that the correlation between learning difficulties and teaching methods is r=0.419 with a significant level (p=0.000), the correlation between learning difficulties and classroom environment is r=0.404 with a significance level (p=0.000p), and the correlation between learning difficulties and peers' interaction is r=0.358 with a significance level (p=0.000p) which are less than 0.05 that p<0.05; this indicates that the relationship is statistically significant. Thus, there is a meaningful linear relationship between learning difficulties and available resources, teaching methods, classroom environment, and peers' interaction.

Discussion

This study investigated the internal (personal) and external factors contributing to students' learning difficulties and the relationships between internal (personal) factors and learning difficulties, and external factors and learning difficulties in science subjects at the secondary level in District Panjgur. The internal (personal) factors were prior knowledge, cognitive abilities, and attitude toward learning science subjects. The data show an average level of prior knowledge among the students of Panjgur, which contributes to learning difficulties in science subjects. Learners with higher prior knowledge can understand new concepts more efficiently, which in turn enhances their academic performance (Hailikari et al., 2008). Additionally, data show that students in the Panjgur district have a positive attitude toward learning science. Positive attitudes toward learning science are directly proportional to

higher motivation and better learning outcomes (Aldila et al., 2018). In external factors, both family factors (parental involvement, home environment, and family support) and school factors, such as available resources, teaching methods, classroom environment, and peer interaction, are considered. The data revealed that internal (personal) and external factors considerably caused learning difficulties in science subjects at the secondary level in District Panjgur. The attitude towards learning science subjects and cognitive ability was measured by questionnaires, and prior knowledge was evaluated by students' previous class science subjects' marks. Learning difficulties in science subjects are contributed to by external factors such as parental involvement, limited available resources, and ineffective teaching methods at the secondary level in District Panjgur. The results show that learners' science learning difficulties occurred from a combination of internal and external factors. According to the results, external factors contributed to more learning difficulties in science subjects than internal (personal) factors. Additionally, there is a correlation between cognitive ability and learning difficulties in science subjects. Research has shown that lower cognitive ability can contribute to learning difficulties in science subjects, and academic achievement is dependent on cognitive ability (Shi & Qu, 2022).

The data analysis indicated significant correlations between family-related factors and learners' learning difficulties in science subjects. As parental involvement has a strong positive correlation with learning difficulties in science subjects, it suggests that lower parental involvement is associated with higher learning difficulties among students in science subjects. These findings are associated with a study that found higher levels of parental involvement are associated with fostered student motivation and engagement in science subjects learning (Fan et al., 2010).

A positive correlation between internal (personal) factors and learning difficulties in science subjects is present, as shown by the study. An average positive correlation between prior knowledge and learning difficulties indicates that learners with less prior knowledge tackle more learning difficulties in gaining new scientific concepts. Research has shown that prior knowledge helps decrease cognitive load, leading to higher learning performance, and learning difficulties in science subjects can be minimal (Dong et al., 2020). Also, a positive correlation occurs between an attitude toward science subjects and learning difficulties, indicating that students who face learning difficulties have a negative attitude toward science. A study showed that a positive attitude toward learning science improved learning performance and lowered students' learning difficulties in science subjects (Mao et al., 2021). Additionally, results revealed a positive correlation between the home environment and learning difficulties. This suggests that limited resources in the home contribute to students' struggles in understanding science concepts, which then causes learning difficulties in science subjects. Furthermore, results indicated that students who receive less family support tackle greater learning difficulties in science subjects. The study found that a positive and motivating environment is created when family members help students with learning difficulties in science subjects (Sha et al., 2016).

According to the research results, external factors like school factors impact students' learning difficulties in science subjects. Among the school factors, the correlation between available resources and learning difficulties in science is high. Research has presented that well-resourced schools are important for effective teaching and learning (Cinel, 2022). However, teaching methods correlate with learning difficulties in science. A study showed that advanced and interactive teaching practices, like using experiments, demonstrations, and group work, can develop learners' engagement and learning in science classes (Darling-Hammond et al., 2019). Additionally, the classroom environment and peers' interaction are related to learning difficulties in science subjects. The study suggested that positive peer interactions are connected with higher academic achievement, where learners can cooperate and support each other (Wang & Eccles, 2012).

Conclusion

The primary cause of performing this study was to investigate the students' learning difficulties in science subjects at the secondary level in District Panjgur. The main variables of the present study were internal (personal) factors such as prior knowledge, cognitive ability, and attitude toward science, external factors such as family factors including parental involvement, home environment, and family support, and another external factor was school factors, including available resources, teaching methods, classroom environment, and interaction.

This conclusion is based on the findings that internal (personal) factors, prior knowledge, contribute more to learning difficulties in science subjects. It also identifies that the attitude toward learning science is positive among secondary-level students in District Panjgur. However, it also identifies the cognitive ability of each student, different from others, which is causing difficulties in science subjects. Moreover, among family factors, it is concluded that limited parental involvement, such as limited communication with science teachers and not attending school meetings and events, contributes to learning difficulties in science subjects. Additionally, learning difficulties in science subjects are caused by socioeconomic factors, insufficient resources, and a lack of specific space at home. Furthermore, the school factors, limited available resources included poorly equipped laboratories, outdated course content, and a lack of workshops and programs to develop science learning, and a lack of advanced teaching methods like experimentation and demonstration methods, not using advanced materials like simulation and online resources in schools of Panjgur District. Moreover, classroom environments and peers' interactions also contribute to learning difficulties in science subjects.

From the findings, the present study concluded that both internal (personal) factors and external factors have a relationship with learning difficulties in science subjects. However, findings indicate that among internal(personal) factors, cognitive ability has the maximum relationship with learning difficulties in science subjects. Additionally, the family factors can have a relation with learning difficulties in science subjects. Among the variables, home environment and parental involvement have the maximum correlation with learning difficulties in science subjects. Furthermore, the school factors also correlate with learning difficulties in science subjects. Among the school factors, available resources and teaching methods are highly correlated with students' learning difficulties in science subjects at the secondary level in the district of Panjgur.

Recommendations

1. Parents assemble information from various sources, like politely discussing with their children, attending parents' meetings in schools, communicating with the science teachers frequently, and counselling the child about the importance of science in today's scenario. Additionally, providing scientific facts and reasoning behind some of the everyday basic scientific activities, such as how wet clothes become dry on a hot summer day, why we sweat, and how your ball comes back to the same position when you hit it to the wall. These small activities build their interest and motivation. Also, decrease the learning difficulties in science subjects.
2. Available Resources: The school's available resources and their usage are one of the most important aspects that contribute to the difficulties in science subjects learning. These resources include international standards books, technical materials, well-equipped laboratories, conducting workshops, seminars, or science exhibitions, field trips, and many more. In government schools, the budget of the school fulfils the desired resources, and after a check and balance system is established for the schools, it is ensured that the budget is being utilised in the recommended sectors. The government should also keep its eyes on the private sector; they are providing true science education parallel to the advanced world.
3. Teaching Methods: One of the key factors on which learning difficulties in science subjects depend. The teacher-centred method in the science subject limits learning and causes learning difficulties. The teacher is a primary source who directly knows the causes of students' learning difficulties in science subjects. He can

help the students by applying different teaching methods, coming up with new trends, and applying experimentation and demonstration. In the government sector, science teachers receive competitive salaries; however, they often do not contribute their maximum efforts. The government should check on them and never recruit teachers without passing competitive exams. The administrations of private schools should hire qualified teachers. They should conduct training and workshops for teachers in both sectors.

4. Furthermore, both family and school facilitate the students with the possible precautions to overcome their cognitive ability that hinders learning difficulties in science subjects. The present study noticed that our educational system is mainly based on rote learning, which is the traditional method of learning, and science subjects are not based on this type of learning. Schools and parents both provide the type of tasks or assignments that may increase the cognitive ability of students. Additionally, schools should use an evaluation procedure that assesses cognitive ability and can gauge the level of cognitive ability, which may be further modified.

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