



Self-efficacy of secondary school students in Sikkim

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Abstract

Self-efficacy is one's belief in their capabilities to perform any given task and achieve certain goals. This research assessed self-efficacy levels in secondary school students in Sikkim and whether self-efficacy differed significantly based on gender, school management, and locale. Self-efficacy was assessed among 380 students using quantitative measures. Separate descriptive and independent samples t-tests were run to analyze the data. The results showed that almost half the students were below average in self-efficacy, and a smaller proportion was classified as high or above average. There were no significant differences in self-efficacy scores of male and female students, government and private school students, or rural and urban students. The results highlight that low self-efficacy is common across the different demographic groups, which underscores the need for self-efficacy boosting, confidence building, and motivational interventions in the student's education.

Key words: Self-efficacy, secondary school students, Sikkim, gender differences, school management

Introduction

Believing in one's own ability to succeed is known as self-efficacy, it plays a big role in how well the students do in school. When students have confidence in their skills, they are more likely to try new things, keep going even when learning is tough, and achieve better results in their studies. This belief not only helps them academically but also makes it easier to interact with others and handle stress during their teenage years.

Secondary school students in Sikkim face many new challenges and opportunities. Different cultures, languages, and backgrounds come together in this region, which can make school life both interesting and complex. Understanding how students in Sikkim see themselves and their ability to handle school tasks is very important. It can give teachers and parents an idea to support students and create better learning environments for them.

Despite self-efficacy being crucial for students' success, not much research has been done specifically on secondary school students in Sikkim. This study aims to fill that gap by exploring how confident these students feel about their abilities, what influences these beliefs, and how self-efficacy affects different areas of their lives. The goal is to find ways to help students believe in themselves so they can do their best, both in and out of the classroom.

The term 'self-efficacy' was first coined by psychologist Albert Bandura a Canadian-American psychologist and a professor at Stanford University (Bandura, 1977 as cited in Lopez-Garrido, 2020) [15]. Self-efficacy is more specific and circumscribed than self-confidence (i.e. a general personality trait that relates to how confidently people feel and act in most situations), or self-esteem (i.e. the extent to which a person likes themselves). Self-efficacy makes a difference in how people act, as a follow-up of feeling and thinking. A low self-efficacy is associated with low results in the work, a low self-esteem and negative thoughts about the individual's personal development and accomplishments. A high self-efficacy leads to a strong sense of competence, which helps cognitive processes and performance in areas such as academic achievement. (Vasile

et al, 2011) [27]. Individuals who have high self-efficacy will exert sufficient effort that, if well executed, leads to successful outcomes, where as those with low self-efficacy are likely to cease effort early and fail. Self-efficacy affects every area of human endeavour by determining the beliefs a person holds regarding his or her power to affect the situation; it strongly influences the power choices a person is most likely to make. Self-efficacy plays a major part in determining people's chances for success: in fact, some psychologists rate self-efficacy as talent in the recipe for success. People need to pay special attention to self-efficacy while setting goals to make sure that their efficacy beliefs are in line with their aim and not working against them. (Devpura, 2019) [6].

Self-efficacy is a useful lens for researchers in predicting persistence, emotional reaction and effort (Zimmerman, 2000 as cited in Dahiya, & Kumari, 2018) [7]. In education, self-efficacy is a key contributing factor to learners' success; because self-efficacy influences the choices learners make and the courses of action they peruse (Pajarees, 2002 as cited in Dahiya, & Kumari, 2018) [7]. A classroom climate that is conducive to learning and incorporates Bandura's four sources of self-efficacy can influence student self-efficacy enormously, this increased self-efficacy helps students feel they can meet the academic challenges they face (Bandura, 1997 as cited in Dahiya, & Kumari, 2018) [7]. Dahiya and Kumari, (2018) in their study discussed the following dimensions (Dahiya, & Kumari, 2018) [7]:

- a. **Physical Self-efficacy:** Physical self-efficacy means that individual's views about their physical ability i.e. how well they think, perform tasks as it may encourage or discourage physical activity. Physical self-efficacy measures an individual's perceived self-confidence (Dahiya, & Kumari, 2018) [7].
- b. **Social Self-efficacy:** Social self-efficacy is an individual's assurance in his/her ability to connect in a social interaction tasks necessary to initiate and

maintain interpersonal relationships (Smith & Betz, 2000 as cited in Dahiya, & Kumari, 2018) ^[7].

- c. **Emotional Self-efficacy:** Emotional self-efficacy is an essential feature of emotional functioning, with present measures for students focused on the measurement of self-beliefs in relation to the managements of emotions. It is considered as a vital factor in pertaining good mental health and resiliency in coping with negative emotions (Dahiya, & Kumari, 2018) ^[7].
- d. **Academic Self-efficacy:** Academic self-efficacy refers to a learner's sense of competence and confidence in the performance of class work (Bandura, *et al.* 1997 as cited in Dahiya, & Kumari, 2018) ^[7].
- e. **Spirituality Self-efficacy:** Spirituality self-efficacy terms include inside, the right, world of meaning, the grace of God and his love and also the submission to the will of god and search for knowing him as ultimate goal of creation (Ursula, 1999 as cited in Dahiya, & Kumari, 2018) ^[7, 26].

Mart van Dinther (2011 as cited in Lopez-Garrido, G 2020) ^[15] and a number of his colleagues conducted research on the link between education and self-efficacy. Their conclusions state that self-efficacy is linked to factors such as the strategies that students utilize, the goals that students set out for themselves, and their academic achievements. In other words, higher levels of self-efficacy are related to – what people everywhere largely consider to be – healthy student life habits. This means that those individuals with higher levels of self-efficacy could be subject to doing better in school and being more organized (Lopez-Garrido, G 2020) ^[15].

Review of the Literature

Chabra. S. & Grover. N, 2014 ^[5] made a study on “Self efficacy of Adolescents: Interplay of Gender and Locality” the study was conducted in order to identify the self-efficacy of adolescents. The results revealed that the adolescents had low self-efficacy, which is not an encouraging sign. Further, there was no significant difference in self efficacy of adolescents based on gender and locality.

Motlagh S.E & Amrai K, 2011 ^[17] researched on “The relationship between self-efficacy and academic achievement in high school students”. The aim of the study was to investigate the relation between self-efficacy and academic achievement in high school students. According to the results, self-efficacy is a considerable factor in academic achievement.

Pajares, F *et al*, 2007 conducted a study on “Sources of Writing Self-Efficacy Beliefs of Elementary, Middle, and High School Students”. The purpose of this study was to examine the influence of Albert Bandura's four hypothesized sources of self-efficacy on students' writing self-efficacy beliefs and to explore how these sources differ as a function of gender and academic level (elementary, middle, high). As hypothesized, students perceived mastery experience accounted for the greatest proportion of the variance in writing self-efficacy. Social persuasions and anxiety also predicted self-efficacy. Vicarious experience did not predict writing self-efficacy. Girls reported greater mastery experience, vicarious experience, and social

persuasions, as well as lower writing anxiety. Girls also reported stronger writing self-efficacy and were rated better writers by their teachers. Elementary school students reported stronger mastery experience, vicarious experience, and social persuasions than did either middle school or high school students. Elementary school students also reported stronger self-efficacy. These findings support and refine the theoretical tenets of Bandura's social cognitive theory.

Barry J. Zimmerman *et al*, 1992 ^[28] conducted a study “Self-Motivation for Academic Attainment: The Role of Self-efficacy Beliefs and personal Goal Setting” The causal role of students' self-efficacy beliefs and academic goals in self-motivated academic attainment was studied using path analysis procedures. The study found that students' beliefs in their efficacy for self-regulated learning affected their perceived self-efficacy for academic achievement, which in turn influenced the academic goals they set for themselves and their final academic achievement. It also found that the students' prior grades were predictive of their parents' grade goals for them, which in turn were linked to the grade goals students set for themselves.

Rationale of the study

The last decade has seen a steady rise of reports like desperation and recklessness among the students. In schools, students face problems like inability to pay attention, day-dreaming, jumping into self consciousness and acting without thinking, the secondary school phase is a critical window of opportunity for setting down the essentials that governs the lives of students. Self-efficacy is crucial in education because it influences a student's motivation, effort, and perseverance. When students believe in their ability to succeed, they are more likely to set challenging goals, put in the effort required, and persist in the face of difficulties. This positive mindset enhances learning outcomes and contributes to overall academic success. Self-efficacy can greatly impact how people feel, think, behave, motivate themselves and seek challenging problems. It helps students to set challenging goals and demonstrate a stronger sense of commitment to them. Self-efficacy is crucial for the advancement of educational growth of the students and to make them able to deal with their daily tasks and future endeavors. This shows the importance of this study in the field of education and if this variable is not considered, it will be a loss for advancement of school education in state.

Statement of the Problem

The objective of the study is to explore Self-efficacy of secondary school students of Sikkim with reference to management, locale and gender in order to make students aware of about their Self-efficacy. On, the basis of the rationale of this study the problem is stated as ‘Self-efficacy of Secondary School Students in Sikkim’

Operational Definition

Self-efficacy: Self-efficacy includes 5 dimensions i.e. physical self-efficacy, academic self-efficacy, social self-efficacy, emotional self-efficacy and spiritual self-efficacy. Self-efficacy beliefs should be relevant for understanding educational outcomes because self-efficacy leads to specific behaviors and motivations that can encourage or discourage effective performance (Dahiya & Kumari, 2018) ^[7].

Secondary School Students: Students who are enrolled in secondary education (class IX and X) belonging to the age group 14 to 18 years are secondary school students.

Objectives

1. To study the level of self-efficacy of secondary school students in Sikkim.
2. To study self-efficacy of secondary school students in Sikkim with reference to the demographic variable "management".
3. To study self-efficacy of secondary school students in Sikkim with reference to the demographic variable "locale".
4. To study self-efficacy of secondary school students in Sikkim with reference to the demographic variable "gender".

Hypothesis

H01: There is no significant difference in the mean score of self-efficacies of secondary school students in Sikkim with reference management.

H02: There is no significant difference in the mean score of self-efficacies of secondary school students in Sikkim with reference locale.

H03: There is no significant difference in the mean score of self-efficacies of secondary school students in Sikkim with reference gender.

Methodology

To study the self-efficacy in secondary school students in different districts of Sikkim with reference to management, locale and gender, the researcher opted Descriptive survey research method.

Population

The population in the study consist of male and female students of class IX and X from both Government and Private Secondary and Senior Secondary Schools belonging to the rural and urban locale of Sikkim.

Sample

The investigator used Complex Sampling method for selecting the sample. Complex sampling involves advanced survey designs that extend beyond simple random sampling, incorporating stratification, clustering, or multistage selection to enhance efficiency and representativeness (Lohr, 2022) ^[14]. These methods address population

heterogeneity by dividing it into subgroups (strata) or selecting pre-existing clusters, reducing costs and fieldwork complexity (Levy & Lemeshow, 2013) ^[13]. If properly implemented, complex sampling improves generalizability while maintaining methodological rigor. The investigator took 95% confidence level and 5% margin of error. After calculation, the sample size was found to be 380 secondary school students which was further divided by 4(No. of students required from each school) to get the total number of sample schools, which is 95. After that the investigator randomly chose 95 out of 267 schools by using lottery method. The investigator took 24 schools (7 private and 17 Government schools) from Gangtok District, 12 schools (3 private and 9 Government schools) from Pakyong District, 13 schools (3 private and 10 Government schools) from Soreng District, 15 schools (2 private and 13 Government schools) from Gyalshing District, 23 schools (4 private and 19 Government schools) from Namchi District and 8 schools (1 private and 7 Government schools) from Mangan District of Sikkim. This shows that the study had 20 Private and 75 Government schools, out of which 80 students belonged to Private School and 300 students, belonged to Government Schools. Students were also asked to write their permanent residence to calculate the scores with reference to Locale.

Tool used for the study

Self-Efficacy

The investigator is going to use Students' Self-Efficacy scale developed by S. Dahiya and N. Kumari (2018) ^[7]. This scale consist 35 items divided into 5 dimensions namely:

1. Physical self-efficacy
2. Social self-efficacy
3. Emotional self-efficacy
4. Academic self-efficacy
5. Spiritual self-efficacy

This scale was highly reliable as spearman brown found value 0.798 and by Cronbach's alpha 0.963. The validity of the Students' Self-Efficacy scale constructed was tested on the basis of face validity and content validity. All the statements were found to have 80% or more unanimity. It was standardized on secondary and senior secondary school students.

Data Analysis

Objective 1: To study the level of self-efficacy of secondary school students of Sikkim.

Table 1: Showing the percentage of students with different level of Self-efficacy.

Sl. No.	Range of Raw Scores	No. of Students	Level of Self-efficacy
1	112 & below	35 (9.21%)	Extremely Low Self-efficacy
2	113 to 121	50 (13.15%)	Low Self-efficacy
3	122 to 132	91 (23.94%)	Below Average Self-efficacy
4	133 to 145	112 (29.73%)	Average Self-efficacy
5	146 to 155	60 (15.78%)	Above Average Self-efficacy
6	156 to 165	32 (8.42%)	High Self-efficacy
7	166 & above	0	Extremely High Self-efficacy
	Total-	380	

The table 1 represents the self-efficacy levels of 380 students based on their raw scores. A significant portion of students fall into the lower categories, with 23.95%

classified as Below Average Self-efficacy, 13.16% as Low Self-efficacy, and 9.21% as Extremely Low Self-efficacy, totalling 46.32%. About 29.73% of students fall into the

Average Self-efficacy category, which represents the largest single group. Meanwhile, 15.8% of students are in the Above Average range,

and 8.42% are classified as having High Self-efficacy. Notably, no students scored high enough to be considered Extremely High Self-efficacy.

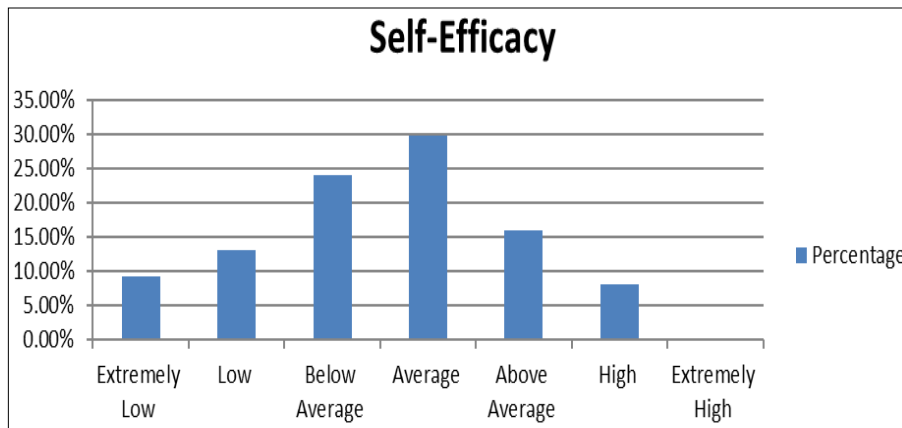


Fig 1: Level of Self-Efficacy of secondary school students in Sikkim.

Objective 2: To study the self-efficacy of secondary school students of Sikkim with reference to Gender (Male and Female)

Objective 3: To study the self-efficacy of secondary school students of Sikkim with reference to Management (Govt. and Pvt.)

H01: There is no significant difference in the mean score of self-efficacies of secondary school students of Sikkim with regard to gender.

H02: There is no significant difference in the mean score of self-efficacies of secondary school students of Sikkim with regard to management.

Table 2: Showing mean, standard deviation and t-test of self-efficacy between male and female secondary school students of Sikkim.

Variable	Gender	N	M	SD	T	P	Sig
Self-Efficacy	Male	190	133.3842	14.55312	-.574	.566	NS
	Female	190	134.2737	15.60962			

Table 3: Showing Mean, Standard Deviation and t-test of self-efficacy between government and private secondary school students of Sikkim.

Variable	Management	N	M	SD	T	P	Sig
Self-Efficacy	Government	300	133.3267	15.32087	-1.259	.209	NS
	Private	80	135.7125	14.05792			

Table 2 presents the descriptive statistics and t-test results comparing the self-efficacy of male and female secondary school students in Sikkim. To assess whether a gender-based difference exists in self-efficacy, an independent samples t-test was carried out. The findings showed that female students (M = 134.27, SD = 15.61, n = 190) reported slightly higher self-efficacy scores than their male counterparts (M = 133.38, SD = 14.55, n = 190). However, this difference was not statistically significant, $t(378) = -0.574$, $p = 0.566$. Given that the p-value exceeds the standard threshold of 0.05, the null hypothesis (H_{04}), which posits no significant gender-based difference in self-efficacy, is retained.

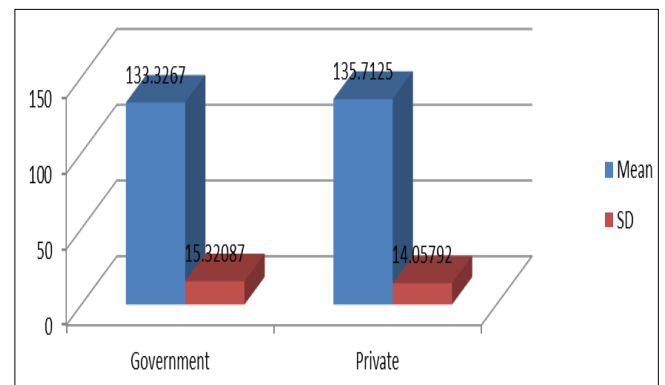


Fig 3: A bar graph showing Mean and Standard Deviation of self-efficacy between government and private secondary school students of Sikkim

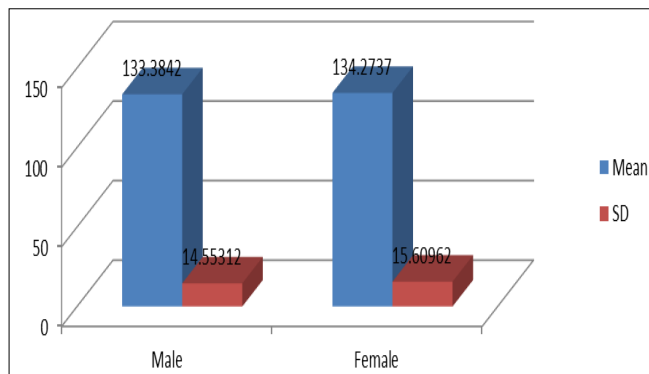


Fig 2: A bar graph showing Mean and Standard Deviation of self-efficacy between male and female secondary school students of Sikkim.

Table 3 shows the mean scores, standard deviations, and t-test results for self-efficacy among secondary school students in Sikkim based on school management type (government vs. private). An independent samples t-test was employed to examine if there is a meaningful difference in self-efficacy between students attending government and private schools. The results indicate that students from private schools (M = 135.71, SD = 14.06, n = 80) had slightly higher self-efficacy scores compared to those in government schools (M = 133.33, SD = 15.32, n = 300). Despite this slight difference, the result was not statistically significant, $t(378) = -1.259$, $p = 0.209$. Since the p-value is

greater than the standard alpha level of 0.05, the null hypothesis (H_0), which states there is no significant difference in self-efficacy based on type of school management, is upheld.

Objective 4: To study the self-efficacy of secondary school students of Sikkim with reference to Locale (Rural and Urban)

H₀₃: There is no significant difference in the mean score of self-efficacies of secondary school students of Sikkim with regard to Locale.

Table 4: Showing Mean, Standard Deviation and t-test of self-efficacy between rural and urban secondary school students of Sikkim.

Variable	Locale	N	M	SD	T	P	Sig
Self-Efficacy	Rural	286	133.8427	15.29108	.031	.975	NS
	Urban	94	133.7872	14.48683			

Table 4 displays the descriptive statistics and the results of an independent samples t-test comparing the self-efficacy of secondary school students from rural and urban areas in Sikkim. The analysis aimed to determine whether there is a significant difference in self-efficacy based on locale. Students from rural areas had a mean self-efficacy score of 133.84 (SD = 15.29, n = 286), while their urban counterparts had a mean score of 133.79 (SD = 14.49, n = 94). The computed t-value was 0.031, with a corresponding p-value of 0.975, which is well above the commonly accepted significance level of 0.05. Given this result, the null hypothesis (H_0), which posited no significant difference in mean self-efficacy scores between rural and urban students, is retained.

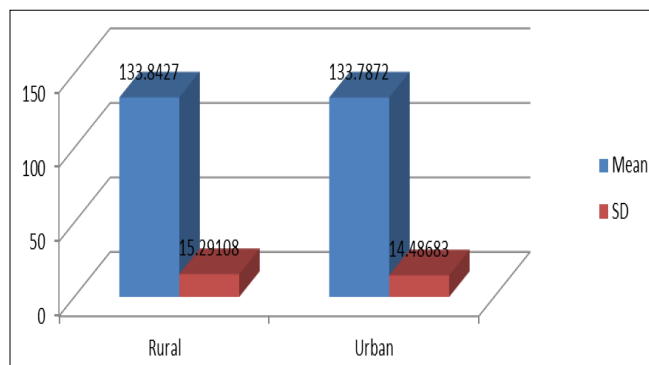


Fig 4: A bar graph showing Mean and Standard Deviation of self-efficacy between rural and urban secondary school students of Sikkim

Findings

1. The distribution of self-efficacy scores among secondary school students in Sikkim reveals that a substantial proportion of learners fall within the average to below-average range of self-efficacy. This indicates the presence of a considerable number of students whose confidence in their academic abilities may be insufficient for optimal performance, necessitating targeted interventions to enhance their self-belief and persistence in learning tasks.
2. The results indicate that gender does not exert a statistically significant influence on the self-efficacy levels of secondary school students in Sikkim. Both

male and female students exhibit comparable degrees of self-belief in their academic competence, suggesting that self-efficacy is shaped more by contextual and pedagogical factors than by inherent gender-related differences.

3. The analysis further reveals that the type of school attended—whether government or private—does not significantly impact students’ self-efficacy. This finding suggests that institutional ownership or management alone is not a determinant of students’ perceived capability, thereby shifting the focus toward classroom practices, teacher–student interactions, and the quality of instructional support.
4. Similarly, the geographical location of the school, whether situated in rural or urban areas, does not appear to have a statistically significant effect on students’ self-efficacy. This uniformity across locales indicates that self-efficacy development can be addressed through universal pedagogical strategies applicable across diverse geographical contexts.

Conclusion

The present study aimed to investigate the self-efficacy levels of secondary school students in Sikkim and examine whether self-efficacy varies based on gender, school management, and locale. The findings suggest that a significant proportion of students exhibit low to below-average self-efficacy, pointing to a broader concern regarding students’ confidence in their academic and personal capabilities.

Furthermore, the statistical analyses indicate no significant differences in self-efficacy across gender, school type (government vs. private), and locale (rural vs. urban). This highlights that self-efficacy is a common concern across all student demographics, regardless of these background factors.

Educational Implications

In light of these findings, it is imperative that educational stakeholders in Sikkim focus on designing and implementing pedagogical strategies that systematically strengthen students’ self-efficacy, irrespective of gender, school type, or geographical location. Drawing on Bandura’s (1997) social cognitive theory, interventions should incorporate mastery experiences, vicarious learning, verbal persuasion, and emotional regulation to cultivate resilience and confidence in learners. Teacher professional development programs could prioritize training in formative feedback, differentiated instruction, and growth mindset approaches. Furthermore, incorporating collaborative learning environments and mentorship schemes can provide students with both the social and cognitive support necessary to enhance their belief in their own capabilities, ultimately contributing to improved academic achievement and lifelong learning dispositions.

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