



**Chapter - 02**  
**Literature Review**



## CHAPTER - 2

### REVIEW OF LITERATURE

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#### 2.1 MEANING OF REVIEW:

The review of the literature is one of the key components of the study because it aids in developing the methodology, determining the cause-and-effect relationship of the study, and identifying any gaps in the literature that need to be filled. Reviews of the literature serve as versatile guides for a certain subject. A critical and in-depth analysis of prior research is what is done in a literature review. Anyone reading the document will be able to understand why we are pursuing this particular study development because it is an overview and synopsis of a certain research topic. In order to understand what contributions can be offered and to build a suitable study strategy, it is also helpful to review the literature.

##### 2.1.1 Importance of Review of Literature:

There are several purposes to writing a literature review:

- Why to force researchers to synthesize, assess, and compare original research in that particular area, giving them a great place to start when conducting research in a new field.
- To inform the design and methodology of the proposed study.
- To be able to detect conflicting points of view expressed by different authors.
- To form Basis of forthcoming research work.
- To discuss relevant research carried out on the same topic.
- To provide summary of the research area.

## 2.2 MAIN REVIEWS ARE

**Tan, May; Lan, Ong Saw (2019)** investigates the stances and opinions of upper subordinate arithmetic and science faculty members (MST) whose undergraduates are the first and second cohorts to study arithmetic and wisdom in English. The findings of surveys, scholar interviews, and hall observations illustrate MST stances and beliefs influence teaching game plans. The information manifests by virtue of what exam tactics, professor attitudes, and theories communicate to promote interpretation use and a devote effort to something keywords during education (Tan 2019)<sup>1</sup>.

**Lim, Chap Sam; Presmeg, Norma (2018)** When examining in what way or manner to educate arithmetic in two expressions: According to a study named A Teaching Dilemma of Malaysian Chinese Primary Schools, arithmetic is instructed in two together Mandarin and English in Malaysian Chinese basic schools on account of the difficult sociocultural needs of the Malaysian Chinese society. Particularly in depressed-operating courses, coaches knowledgeable the challenge of transitioning 'tween English and Mandarin (Lim 2018)<sup>2</sup>.

**Doganay, Ahmet; Bal, Ayten Pinar (2017)** When developing traditional and alternative measuring instruments, teachers regularly took their students' levels and levels of acquisition into account, according to a study on the measurement of students' accomplishment in teaching fifth-year mathematics classes in primary schools. They disregarded the level of analysis-synthesis, though. In this regard, it might be suggested that attention be made to measuring students' higher order thinking skills and the usage of additional alternative assessment tools while developing traditional and alternative assessment tools (Doganay 2017)<sup>3</sup>.

**Jo Boaler, Lang Chen, Cathy Williams, and Montserrat Cordero (2016)** A study on the value of visual mathematics discovered that studying mathematics visually also has an impact on the brain. Finally, they provide three suggestions for parents and teachers<sup>4</sup>.

Encourage visual approaches in students' and celebrate this by removing an idea that strong mathematics learners are only those who can calculate fast and memorize.

1. Encourage students to use their figures while calculations and solving problems.

2. The teaching and learning of mathematics require to become more visual - there is no idea or concept that cannot be illustrated or thought visually.

**Furkan özdemir, Murat Duran, Abdullah Kaplan (2016)** researched on Middle School Students for their self-efficacy perceptions of Visual Mathematics Literacy. The motive was also to find their perceptions of Problem-Solving Skill<sup>5</sup>.

**Singh et al (2016)** examined the factors having an impact on students' academic achievement. Ex post facto research design was used in the study. Further, an instrument, designed for the measurement of students' educational attainment, was used to collect data on management students. The outcome disclosed a statistically positive influence of training facilities, proper guidance, and communication skills on the performance of students in their learning (Singh 2016)<sup>6</sup>.

**Shera fat and Venkatesh Murthy (2016)** in their study, tried to comprehend whether study habits had an impact on secondary and senior secondary school students' performance or not. In the study, a sample of 625 students of Mysore was taken using stratified random sampling technique. The outcomes showed study habits enhance academic achievement and secondary school students did better than senior secondary students (Shera fat 2016)<sup>7</sup>.

**Dzever (2015)** in his study, evaluated the effect of home environment factors on educational attainment of students studying in public schools in Abuja, Nigeria. He took samples of 300 students from six public schools. In the study, random sampling method was used to supervise the questionnaire. In his study, he used a descriptive survey research, designed for the study. The data for the study was taken from the obtained scores from the selected four school subjects. The analyzation of data was done using inferential and descriptive statistical techniques; ANOVA (Pearson Product Moment Correlation and Multiple Regression Analysis. The outcomes disclosed a remarkable positive correlation between academic achievement permissive parenting styles. Further, the result showed that economic status, occupational level, parents' educational background as the primary predictive variables leaving impact on learners' educational performance (Dzever 2015)<sup>8</sup>.

**Ghosh (2014)** in his study, found a correlation between emotional intelligence and academic achievement. The results of his study disclosed a noteworthy and positive relationship between educational attainment and emotional intelligence. Further, the study revealed that learners with low to high socio-economic conditions differ from each other on academic achievement and emotional intelligence (Ghosh 2014)<sup>9</sup>.

**Korir and Kipkemboi (2014)** in their study of The Impact of School Environment and Peer Influences on Students' Academic Performance in Vihiga County, Kenya, analyzed the effect of school atmosphere and peer influence on students' educational performance. In their research, they found that school environment and peer influence had a crucial role in students' academic achievement (Korir 2014)<sup>10</sup>.

**Roy et al (2013)** in their study of Emotional intelligence and academic achievement motivation among adolescents: a relationship study, also found a considerable positive relationship between educational attainment, emotions, and intelligence. They observed that the students having low, average, and high educational attainment differentiated each other on intelligence and emotion, in their study of Internal factors Affecting Academic Performance among Pharmacy Students in Malaysian Public Institutions of Higher Learning, examined the effect of internal factors of pharmacy students' educational performance to find out whether these factors influenced their average cumulative grade points and the year of study. The outcomes 58 disclosed that there was a significant association of academic achievement with time management skills, academic competency, test anxiety, neuroticism, and test competency. The difference was significant among students studying in 2nd, 3rd and 4th year of pharmacy course. Post-hoc explanation disclosed that there was a remarkable difference in the conscientious level between the students of second and 4<sup>th</sup> year (Roy 2013)<sup>11</sup>.

**Alkhuba (2013)** in his study the influence of socio-economic factors on the performance of students in education at the secondary level, found that there was a remarkable influence of socioeconomic factors on students' academic achievement. Further, he observed that socio-economic factors had greater influence on female students (Alkhuba 2013)<sup>12</sup>.

**Anees (2013)** in his study on the relation of intelligence with academic achievement among students of class 8 dealt with the relationship of the identification of magnitude

between educational attainment and intelligence. The study was conducted over 180 students from AMU girl high school and high school. R.B. Cattell conducted the culture faire intelligent test. Major outcomes of the study were; there was a positive correlation between academic achievement and intelligence and no any remarkable difference between boys and girls (Anees 2013)<sup>13</sup>.

**Kanti, K.S. (2013)** in this study titled A Study of the Value Preferences of Prospective Secondary School Teachers, went through the observation of 650 probable secondary school teachers from 10 colleges of Nagarjuna University. The valuation of the prospective teachers was done by Dr. S. P. Ahluwalia, L Singh, and Dr. (Mrs.) Harbhajan. Major results of the study were; the participants gave first priority to social value and the least priority to political value, there was a significant difference between male and female prospective teachers over value preferences, the difference on value preferences was also remarkable among graduate and postgraduate prospective teachers (Kanti 2013)<sup>14</sup>.

**Kumari and Garita (2012)** in their study of the relationship between anxiety and academic achievement among senior secondary school students carried out on the students studying in North-western Delhi schools, tested three null hypotheses with the use of data collected from research instruments. The instrument used in the study was Stress Inventory, designed and developed by Nagina (1990). The achievement of students was taken from the previously held exams. Results showed a significant relation between performance and stress. The difference was found on three stress 57 levels - low, moderate, and high. Learners with moderate stress had higher academic achievement than one with less stress. The study also disclosed gender had no mediation in stress and performance (Kumari 2012)<sup>15</sup>.

**Abukar and Adegboyega (2012)** in their study, found age and gender as determinants of educational attainment among students of mathematics. There was a low positive relationship between gender and age in regards with performance at schools (Abukar 2012)<sup>16</sup>.

**Shekhar and Devi (2012)** in their study of the influence of gender on academic achievement of college students, found that there was a remarkable difference in educational attainment of students studying arts and science subjects. The difference was

also found among male and female students. The difference showed that gender had a major role in the performance of arts and science students (Shekhar 2012)<sup>17</sup>.

**Mittal (2008)** A sample of 640 secondary school students were used in his study, Academic achievement of secondary level pupils in connection to their mental health and area. He discovered that students from various areas had very varying educational levels. The students residing in urban area were better in performance in comparison with one of rural areas. Further, he found that the students of urban areas had better learn atmosphere at home apart from the school 56 than the rural students. He found a remarkable correlation between academic achievement and mental health of students (Mittal 2008)<sup>18</sup>.

**Edward and Allen (2008)** in their study titled as Value Clarification, Used as Intervention for Urban, Delinquent, Pregnant Adolescents, and Young Mothers, framed a questionnaire to map the changes in social views, attitudes, and desired behaviors that could disclose personal values. Their team of social workers stayed at the school for pregnant, young mothers, and delinquent adolescents. They found that the participants built several values including the permission for alcoholic beverages, appreciation of family usage of illicit drugs, future planning, honesty, and permission for violence (Edward 2008)<sup>19</sup>.

**Babu et al. (2008)** in their study named as A Study on Higher Secondary Students Achievement in Accountancy and their Parental Encouragement, explained whether any remarkable difference in gender, locality and family was or not in students of secondary schools. Major findings of the study were; remarkable low relationship between performance and parental encouragement in terms of subject like accountancy (Babu 2008)<sup>20</sup>.

**Suneetha et al. (2001)** Researchers concluded that gender was a more important factor than IQ in predicting performance in their study, A Study on Age and Gender Differences on the Factors Affecting High Academic Achievement. Female students were on the top, had better concentration and interaction than boys. Male students were better than female students in reasoning, drilling dimension, and reasoning (Suneetha 2001)<sup>21</sup>.

## 2.3 DISCUSSION

The results of the review of literature on teaching with model give a clear idea that there are a few researches conducted in the area of teaching with model in mathematics. The reviewed studies include experimental research and survey studies etc., most of the studies are experimental nature. The review of literature revealed that the jurisprudential inquiry model of teaching social science benefitting than the traditional way of teaching social science. Some of the studies are suggested that jurisprudential inquiry model of teaching would be better choice to enhance academic achievement in social science among secondary school students.

Majority of the studies were conducted effectiveness of jurisprudential inquiry model of teaching on languages, biology, ecology, law etc. So, for there is no studies on Model Teaching Program to achieve Practical and Visual Development of Mathematics, value preferences and academic achievement in Mathematics. So, the researcher wanted to conduct the study on this topic. The study of review of related literature provided an insight into the variables as mentioned. It is helped the researcher to found research gaps identified from the review. The present study aims to find the effectiveness of Model Teaching Program to achieve Practical and Visual Development of Mathematics among students in Secondary Education. Study of review of literature gave depth of knowledge about research questions, defining the variables, selecting the statistical method, design of the study.



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