Chapter - II

Review of Relate Literature
CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter presents the details of the review of related literature. The studies reviewed are presented under the following headings: Studies on Self-Regulated Learning Strategy (SRLS) and Academic Achievement, Studies on Internet Competency (IC) and Academic Achievement, Studies on Academic Achievement, and Conclusion.

2.1 STUDIES ON SELF-REGULATED LEARNING STRATEGIES AND ACADEMIC ACHIEVEMENT

Lawanto and Santoso (2013) revealed that students had different Self-Regulated Learning (SRL) profiles. Students in the improved group reported a greater awareness of planning, monitoring, and regulating strategies. On the other hand, those in the declined group showed a lower awareness of the SRLS at the end of semester. In addition, emergent themes related to students’ SRL and learning experience while using the enhanced guided notes were found.

Walter (2012) has found significant differences with regard to pedagogy, instructors’ gender, and student gender on the Learning Strategies and motivation subscales as operationalized by the Motivational Self-Regulated Learning Questionnaire (MSLQ). Male and females students reported significant post-test differences with regard to the gender of instructor and the style of pedagogy. The results of this study showed a pattern where more positive responses for students of both genders were found with the same-gender instructor. The results also suggested
that male students responded more positively to project and problem-based courses with changes evidenced in motivation strategies and Resource Management. Female students showed decrease in Resource Management in these two types of courses. Further, female students reported increase in the lecture with active learning courses.

Ahmad, Hussain and Azeem (2012) revealed significant correlation between the variables. Strongest relationship was found between student's academic self-efficacy and self-efficacy for self-regulation. Self-efficacy beliefs at academic domain level were found contributing significantly to the prediction of AA. Significant gender differences were not found on measures of self-efficacy beliefs at academic domain level, school identification, and anxiety. Girls’ AA was found better than the boys’ achievement. Boys were reported better than girls on measure of self-efficacy for SRL.

Saad, Boroomand and Abbasnasab (2012) revealed that there is a strong relationship (r=.80) between the use of SRLS and students’ AA which is consistent with the findings of studies conducted before. However, considering the difference between male and females concerning the use of different components of SRLS, the findings of this study showed that there is a difference between males and females as to the use of SRLS. Females outperformed males in both AA and the use of SRLS.

Usta (2011) suggested three major findings: a) Online self regulated learning skill levels affect attitudes of students towards the Internet. b) Online SRL skill levels differentiate student attitudes towards web-based education in terms of the factor of the “effectiveness of web-based instruction”. c) Online SRL skill levels differentiate attitudes of students towards computer.

Dangwal and Thounaojam (2011) provide insight into the self-regulatory Learning Strategies adopted by children working at Minimally Invasive Education
(MIE) Learning Stations. This learning takes place due to self-motivation, intrinsic goal orientation, Rehearsal and Elaboration which results in school going children learning computer literacy on their own and doing well in academics or out-of-school children joining formal schooling. It has been observed that children, if exposed to a situation where learning is not induced, actively construct their own knowledge and develop critical insights into how they think. These traits of self-regulation allows a child to consciously reflect on what might be the most effective way to master the learning goal and chooses an appropriate strategy to accomplish the goal. MIE captures the curiosity and self-organizing behavioral traits of the children which drives their interest towards further education. Hence, schools are not the only privileged sites of learning.

Schuitema, Peetsma and Van Der Veen (2011) indicated that there was a positive relationship between autonomy support and relevance and SRL. Furthermore, students in innovative environments perceived more autonomy support, more emphasis on relevance and more collaborative learning than those in traditional environments. Students in innovative environments, however, reported no more SRL than students in traditional environments.

Dangwal and Gope (2011) find out whether school-going children who are exposed to the Hole-In-The-Wall-Education Limited (HiWEL) learning station are higher on self regulatory behavior as compared to school going children who are not exposed to HiWEL learning station. The results are very encouraging and point in the direction that HiWEL learning station plays a vital role in enabling children to become self-regulated learners. In their study, due acknowledgement is given to MSLQ which has been adapted in the context of HiWEL Learning stations to measure self regulation among children. Interestingly, it also throws light on the fact that some parameters in self-regulatory are more prominent and these parameters are critical to a HiWEL users.
Núñez et al. (2011) suggested that the students enrolled in the training program, comparing with students in the control group, showed a significant improvement in their declarative knowledge, general and on text use of Learning Strategies, increased their deep approach to learning, decreased their use of a surface approach and, in what concerns to AA, statistically significant differences have been found in favor of the experimental group.

Chyung, Moll and Berg (2010) showed that students significantly improved learning by the end of the course and that students’ intrinsic goal orientation and e-learning practice made significant contributions to their learning.

Al-Khatib (2010) revealed that four of the independent variables (intrinsic goal orientation, self-efficacy, test anxiety, and meta-cognitive SRL) were found to be significant predictors of college students’ performance.

Barnard-Brak, Paton and Lan (2010) indicate the presence of five, distinct profiles of SRL replicated across both study samples: super self-regulators, competent self-regulators, forethought-endorsing self-regulators, performance/reflection self-regulators, and non- or minimal self-regulators. Results also indicate that individuals differ significantly in their AA according to their profile membership; for example, minimal and disorganized profiles of SRL are both associated with similar, poorer academic outcomes (e.g., Lower GPAs). These profiles in SRL may be viewed as contributing to the development of theory by elucidating how exactly individuals are and are not self-regulated in their learning.

Eilam, Zeidner and Aharon (2009) showed that significant relationships between conscientiousness, SRL, and achievement. As hypothesized, conscientiousness has been shown to significantly impact AA in the inquiry-based course.
Yukselturk and Bulut (2009) indicated that test anxiety explained a significant amount of variance in female students’ achievement and two variables (self-efficacy for learning and performance, and task value) explained a significant amount of variance in male students’ achievement. It was also found that there were not statistically significant mean differences among motivational believes, self regulated learning variables and achievement in programming with respect to gender.

Arsal (2009) showed that intrinsic motivation, task value, metacognition, time management strategy usage status of the experimental group which reported their self-regulation strategies were significantly different from those of the control group.

Turingan and Yang (2009) showed that the degree of Filipino students’ SRL skills (Cognitive, Metacognitive, and Resource Management) was higher than one of Korean students. Cultural and educational contexts of the two countries were examined to identify possible factors underlying the differences between two countries’ college students in SRL skills.

Wang, Hu, Zhang, Chang, and Xu (2009) showed that statistically significant relationship between the use of SRLS, self-efficacy beliefs, and achievement in learning English were not, providing additional validity information for the scores from the two questionnaires developed in a previous study. Participants’ self-ratings of self-efficacy and use of SRLS; however, were not high. Students who read articles before reading questions had better performance on English written exams than their counterparts.

Askar and Davenport (2009) indicated that scores of Java programming self-efficacy of these students, whose family uses the computers, were higher than those students whose family did not use computers. The correlation between computer skills and Java programming self students enrolled in an introductory Java programming
course. Computer skills included chat, e-mail, word processing, spreadsheet, PowerPoint, web-design, database and programming.

Kesici & Erdogan (2009) revealed that college students' test anxiety and self-efficacy for learning and performance are significant predictors of college students' mathematics anxiety. In addition, college students' Rehearsal and Elaboration of Cognitive Learning Strategies were found to be significant predictors for their mathematics anxiety.

Lee (2008) suggested a research model, based on a successful e-learning model, which presents the relationship between e-learner’s SRLS and the quality perception in learning management systems (LMS). This research model focuses on SRLS and satisfaction with the learning environment. This learning environment consists of a learning management system, learning content, and interaction that are provided by e-learning. Especially, this study suggests that e-learner’s SRLS is very important in e-learning performance.

Puzziferro (2008) showed that online technologies self-efficacy scores were not correlated with student performance. The Motivated Strategies for Learning Questionnaire subscales, Time and Study Environment and Effort Regulation were significantly related to performance. Students who scored higher on these subscales received higher final grades. In addition, Rehearsal, Elaboration, Metacognitive Self-Regulation, and Time and Study Environment were significantly positively correlated with levels of satisfaction.

Artino (2008a) suggested the following educational implications for online course developers and policy makers. a) Use of SRL theory as a frame work. b) Promote task value beliefs. Instructional designers should consider designing their
online courses in such a way that enhances the extent to which students value the learning tasks. c) Promote self-efficacy for learning online. d) Address boredom and frustration. Findings from this study suggest that negative achievement emotions are generally associated with less Metacognitive activity, decreased satisfaction, and reduced continuing motivation. e) Scaffold SRL behaviors. f) Consider subjective perceptions of instructional context.

Artino (2008b) suggested several guidelines for the instructor of online learning: First, the instructor assesses components of students' self-regulation and supplies individualized feedback. Second, the instructor provides students with individualized differential support on the basis of the weaknesses or strengths. Third, the instructor develops and supports students' self-efficacy. Fourth, the instructor clarifies task relevance and designs online activities to produce interest. Fifth, the instructor utilizes peer models and encourages collaboration and co-regulation. In conclusion, his results provide some insight into the complex relations between personal, behavioral, and environmental influences on SRL and overall academic success in an online course. He/she pointed out that SRL has been studied in traditional classrooms as a means of understanding how successful students adapt their cognition, motivation, and behavior to improve learning. He/she concluded that student's SRL is a crucial component for the learners' academic success in an online class.

Winters, Greene, and Costich (2008) stated that computer-based learning environments (CBLEs) present important opportunities for fostering learning. However, studies have shown that students have difficulties when learning in these environments. To better understand the positive and negative influences of CBLEs, SRL models help identify which specific SRL processes are associated with learning, how different learner and task characteristics may be related to students' SRL, and how aspects of
SRL can be best supported in CBLEs. SRL models received a great deal of attention in CBLEs research. As posited by them the SRL model shows that individuals effectively plan, monitor, and control their learning. Importantly, learners can manage their environments. Their results indicate that students adapted their SRL processes to web-based learning and learners and task characteristics influenced their processes. Self-efficacy for SRL has been shown to relate positively to other beliefs critical to academic success when using CBLEs. They have been found from several studies that "nearly one third of the reviewed studies did not include any type of measure of student learning" and that several studies "included learning outcomes, but, did not find significant differences between experimental groups on those outcomes" (p. 440).

Terry & Doolittle (2008) indicated that while students reported an increase in time management behaviors, there was no subsequent effect on the students' self-efficacy and SRL, and there were no effects based on type or timing of feedback.

Foust (2008) found that students controlling their learning were an important consideration in the course. The subscale measures for self-efficacy and task performance gave the mean score as 5.70, with a range of actual scores from 4.00 to 6.63. The mean score for test anxiety is 3.97, with scores ranging from 2.00 to 6.80. The findings indicated that higher scores on this subscale reflect greater test anxiety.

Bhattacharyya (2007) Regression indicated that intrinsic goal orientation, self-efficacy, and Rehearsal predicted AA in US, while self-efficacy and Peer Learning predicted AA in India.

Mayville (2007) concluded that self-reflection strategies monitored performance and success. The study confirmed that the possible range of Learning Strategies that could be shared with online students as an intervention to help them become active...
learners. Although students used different Learning Strategies in the online classes, knowledge construction, self-regulation, and technology strategies were essential to their AA. Knowledge construction strategies were essential to online learning because they kept participants focused on content and increased their understanding of information. Self-Regulation Strategies were essential to online learning because they kept participants focused on deadlines, assignments, and processing information. Technology strategies were essential to online learning because they promoted comfort with computers, programs, and learning platforms thereby reducing frustration with learning online.

Van-Den-Hurk (2006) showed that students who are better time-planners and who have better self-monitoring skills were more efficient in allocating their individual study time (spent less time on individual study), prepared more appropriately for the tutorial group meeting (although not significant) and achieved higher scores on Cognitive tests.

Anderton (2006) indicated that findings supported the hypothesis that there was a relationship between the use of goal analysis forms and evaluation and management forms to develop self-regulatory skills in pre-service teachers taking an online course. The results of the study did not support the hypothesis that the use of goal analysis forms and evaluation and management forms would result in higher average quiz scores for pre-service teachers taking an online course.

Saparniene, Merkys, and Saparnis (2006) showed that attention was statistically more strongly related to computer literacy while intelligence had a weaker relationship with computer literacy.
Irini (2005) showed that second grade students' use of Self-Regulatory Strategies and feelings of satisfaction were significantly associated with their performance. However, Metacognitive experiences reported after the solution was only slightly related to the students' actual self-regulative behavior during the task, implying that the relations of students' regulatory efforts with their Metacognitive processes still developing at such a young age.

Lynch and Dembo (2004) revealed that verbal ability and self-efficacy related significantly to performance, together explaining 12 percent of the variance in course grades. Self-efficacy for learning and performance alone accounted for 7 percent of the variance.

Eshel & Kohavi (2003) showed that four distinguish perceived classroom control styles were determined, based on the balance between teacher and student control over learning. It was hypothesized that student mathematics achievement would be contingent on the combined effects of teacher and student control: it would be highest when both teacher and student control is high, and would be lowest when both of them are low. Student adoption of SRLS would be linked to the net effect of student control: they would be highest when student control is high and teacher control is low, and would be lowest when teacher control is high and student control is low. The data tended to support these hypotheses, indicating that both achievement and self-regulation strategies were contingent on classroom processes.

Robert Cobb (2003) revealed that employment of SRL behaviors differed between humanities and technical courses. Time and Study Environment management, and intrinsic goal orientation, categories reported significant findings in their relationship to academic performance. The factors affiliated with Time and Study Environment management and intrinsic goal orientation were used as predictors in the
development of a mathematical formula used to predict academic success in a web-based course. These predictors explain 21 percent of the variance in the academic success rating calculated using the mathematical formula developed from this study.

Shih and Gamon (2002) indicated that students used most of the Learning Strategies to find important ideas from lectures and to memorize key words of important concepts. They seemed to be more interested in checking their grades than in communicating with the class and instructors via e-mail, discussion forum, or chat room. Learning Strategy (LS) was the only significant factor that explained about one-fourth of student achievement measured by class grade.

Chen (2002) revealed that Effort Regulation had a positive effect, Peer Learning a negative effect on learning computer concepts in lectures. Prior computer experience had no effect. Data were inconclusive on effective strategies in hands-on lab.

Stefanou and Salisbury-Glennon (2002) indicated that significant changes in motivation and Cognitive Strategy use by the end of participation in the learning community. Within the motivation subscales, students in the learning communities reported significantly higher levels of intrinsic and extrinsic motivation, more internal control of their learning, and self-efficacy, along with significantly lower levels of test anxiety and task value. Within the Learning Strategies subscales, students reported increases in their use of Rehearsal Strategies, Organization Strategies, Critical Thinking, time management, and the use of Peer Learning and help-seeking behaviors.

Niemczyk and Savenye (2001) revealed that Self-efficacy was correlated to the course grade ($r= .30$) and nine percent of the variation in course grade explained by differences in self-efficacy of the students. Over 79 percent of the students thought that they were responsible for their success in learning. They thought that their study
schedule (24%) and discipline (24%) helped them become a better learner. Around 50 percent of the students thought that reading a text book and taking notes were the methods to use to study for this class and other course. Students noted that they took the computer literacy course because they thought the content would be helpful and attractive. Other reasons for taking this course were that the course is required for academic major (80%), improves their academic skills (73%), fits into their schedule (73%), and improves their career prospects (70%). In order to achieve academic success, they insisted that students must be able to self-regulate their own learning by using motivation and Learning Strategies. They found that SRLS are related to course grade in a computer literacy course.

Vanderstoep, Pintrich and Angela (1996) suggested that the components of knowledge, motivation, and self-regulation do distinguish high from low achievers in social and natural science courses, but not in the humanities courses.

Pintrich and De Groot (1990) revealed that, depending on the outcome measure, self-regulation, self-efficacy, and test anxiety emerged as the best predictors of performance. Intrinsic value did not have a direct influence on performance but was strongly related to self-regulation and Cognitive Strategy use, regardless of prior achievement level.

Zimmerman and Martinez-Pons (1990) showed that gifted students displayed significantly higher verbal efficacy, mathematical efficacy, and strategy use than regular students. In general, 11th grade students surpassed 8th graders, who in turn surpassed 5th grader son the three measures of SRL. Students' perceptions of both verbal and mathematical efficacy were related to their use of Self-Regulated Strategies. Evidence of relations between students' strategic efforts to learn and perceptions of academic self-efficacy is concordant with a triadic view of SRL.
Harring-Hendon (1989) concluded that self-directed learning was essential for higher AA in distance education programs because it involves the learner extensively in self-directed or SRL. Commitment and motivation are factors that are important to success in college.

2.2 STUDIES ON INTERNET COMPETENCY AND ACADEMIC ACHIEVEMENT

Adegoke (2013) revealed that majority of the students have access to the Internet. Most of the students that have access to the Internet browse more for non-educative information (socio-networking sites). The relationship between Internet browsing and students’ achievement in Agricultural Science through positive is not significant.

Tasir, El-Amin-Abour, Abd-Halim and Harun (2012) showed that the correlation coefficient between teachers’ ICT competency and teachers’ confidence level in using ICT was high (r = .75). However, both correlation coefficients between teachers’ ICT competency (r = .50) and teachers’ confidence level in using ICT (r = .57) with teachers’ satisfaction toward ICT training programmes were moderate.

Kim (2011) indicated that South Korean boys and girls differed in the ways that they used the Internet. Girls were more likely to use the Internet to watch online education classes and blog more frequently and longer than boys, whereas boys were more likely to use the Internet for playing Internet games than girls. Results indicated that Internet use for educational purposes was associated with adolescent AA. Social and recreational-Internet use of the Internet was associated with lower AA. The pathways did not vary for boys and girls. Parent-child relationships (closeness and
conflict) were found to be vital to youth adjustment and played a significant role in the association between adolescent Internet use and academic and behavioral outcomes.

Alex (2011) revealed that performance is significantly correlated not only with gender and academic ability, but also with the length of time students spend productively in the online classroom as reflected in their achievement in online assessments.

Son, Robb and Charismiadji (2011) revealed that in terms of the use of computer applications, many teachers tended to use word processing, email, Web and multimedia programs frequently whereas they rarely or never used other types of applications such as databases, graphics, concordances, blogs, wikis, online discussion groups, voice chatting and video conferencing programs. Comparing the primary school teachers (50) and non-primary school's teachers (23), the non-primary school teachers indicated that they used all of the listed computer applications more often than the primary school teachers. This suggests that there are more regular users of the computer applications in the group of non-primary school's teachers than in the group of primary school teachers. As shown result almost half of the teachers considered themselves that they have basic or intermediate skills for using general computer applications while over 46 percent of the teachers indicated that they do not have skills for using spreadsheet applications, database applications, Web design applications, Web search engines and communication applications. According to their responses, among the 73 teachers, 25 teachers (34.2%) have a computer connected to the Internet at home; 54 teachers (74%) have their email account; 12 teachers (16.4%) have a personal homepage on the Web; 52 teachers (71.2%) think that they understand the basic functions of computer hardware components; 42 teachers (57.5%) use keyboard shortcuts; 51 teachers (69.9%) use a computer connected to the Internet at school; 36
teachers (49.3%) use the computer for teaching purposes; 64 teachers (87.7%) find it easy to learn something by reading it from the computer screen; 39 teachers (53.4%) use CD-ROMs to supplement their learning/teaching; and 28 teachers (38.4%) use Websites to supplement their learning/teaching. The teachers’ average score of the general computer knowledge test (Section IV of the Questionnaire) was only 4.3 out of 10: the primary school teachers (50) achieved 3.86 whereas the non-primary school teachers (23) achieved 4.74; teachers in Jakarta areas (28) gained 4 whereas teachers in Yogyakarta areas (45) gained 4.49. Interestingly, most teachers answered Questions 1 (75.3%) and 4 (80.8%) correctly but gave wrong answers to Questions 6 (75.3%) and 7 (87.7%). Result shows that the most common factors affecting their use of computers in the classroom include limited facilities (67.1%), lack of computer skills of students (53.4%), limited time (49.3%) and limited access to the Internet (45.2%) followed by lack of computer skills of teachers (37%). Overall, the teachers’ attitudes toward the use of computers were highly positive. The result shows average ratings of the degree of the teachers’ agreement with the given statements. The mean rating of 4.7 (out of 5) in the teachers’ responses to the first and third statements indicates they enjoy using computers and are willing to learn more about computers.

Nwezeh (2010) revealed that a majority of the surveyed academic staff and the students found the Internet to be very useful. Internet resources mostly used by both groups were e-mail and the World Wide Web (www). Search interfaces were used for looking for research information. It was discovered that the users were not given adequate user education to enable them make use of the Internet resources available.

Norris (2010) indicated that bullying by itself does not have a significant association with achievement outcomes, while the influence of Internet use varies in significance and direction of effect based on type of use. Chatting was the only measure
of Internet use that consistently had a significant negative relationship across all achievement outcomes. The association between bullying behaviors and AA was moderated by some forms of Internet use such that at low levels of bullying, children with low levels of Internet use had significantly higher test scores. As levels of bullying increased, low/high Internet users test scores converged to the point that at high levels of bullying behaviors, differences in test scores between low/high Internet users were statistically insignificant. Email use and surfing the web were found to moderate the association between bullying behaviors and reading comprehension. Surfing moderated bullying and math scores. Chatting moderated the relationship between bullying and each of the three outcomes. Lastly, there were no significant race or gender differences in vocabulary or math scores, after controlling for SES (Senior Executive Service), Internet use, parent/child relationships and time measures. However, African American (compared to whites) did less well on reading comprehension scores.

Mcghee (2010) found that there were statistically significant relationships between asynchronous interaction and AA and between online technologies self-efficacy and AA. However, there were low correlations between SRL and AA. The results of this study reflect the constructivist tenants that the student is at the center of the learning experience.

Hadimani and Rajgoli (2010) revealed that the majority (94.44 percent) of the respondents had the ability to recognize a need for information and had the ability to locate the needed information. Though majority of the respondents indicated that they have the ability to locate the needed information, but needed assistance either by library staff or faculty members. Among those who indicated that they were competent to evaluate the information gathered, 8.89 percent did not thought that it was necessary to evaluate the gathered information with respect to its authority, usefulness, currency, and
Respondents are competent in developing search strategies and are able to classify and store the gathered information for future use. Respondents have some knowledge regarding the Copyright and Privacy Laws, but they lack the competence in electronic access to information and institutional policies related to the access and use of information.

Dardenne (2010) showed there is a significant difference in the student achievement levels in schools with greater school use of the Internet and email for school-to-home communication. The results showed that schools are providing information that is accessible to parents through technology, however; the level of use by schools can be improved and parent use is still limited.

YangKim (2009) conducted a study for the purpose of determining if there were correlations among students' self-regulation, Internet use, and AA. Further result showed there were low correlations between self-regulation and academic grades, and self-regulation and Internet use. None of the correlations were statistically significant. Also, there was no statistically significant correlation between Internet use and AA. Self-regulation was highly correlated to self-efficacy. Total Internet access was highly correlated to nonacademic related Internet browsing. Although not statistically significant, the consistent negative correlations between nonacademic Internet use with both self-regulation and achievement indicate that the Internet may present an attractive distraction to achievement which may be due to lack of self-regulation.

Anasi (2006) showed that even though the level of Internet use was low among undergraduates from both the Faculties of Law and Education. Internet use has a very high impact on the academic/career related activities of the students.
Jackson et al. (2006) indicated that children who used the Internet more had higher scores on standardized tests of reading achievement and higher grade point averages 6 months, 1 year, and 16 months later than did children who used it less. Older children used the Internet more than did younger children, but age had no effect on the nature or the academic performance benefits of Internet use.

Lim (2005) showed that the statistics using Spearman’s correlations verified that Internet information literacy correlated with Internet literacy (mechanical aspect) at a relatively high coefficient of 0.71 and with computer literacy at 0.67. However, it must be emphasized that an Internet savvy student with high computer literacy is not necessarily also competent in information literacy. This is because the results verify that information literacy is also dependent on the students’ academic ability and proficiency in the English language. Hence the mechanical IC level is not the only factor influencing the competency level of information literacy. However, it does indicate that students must possess a certain level of computer, Internet and information literacy in order to be able to make more effective use of the Internet (as evidenced by the score in information literacy; that is, the higher the score, the more effective the use of the Internet) as a source of information and knowledge. In addition to computer and Internet literacy, factors influencing Internet information literacy are the English language proficiency and the innate academic ability of the participants. Furthermore, there was correlation between the frequency of use of the Internet for schoolwork and the literacy level of the participants in computer, Internet and information literacy, and also their innate ability. The findings substantiated the following claims: With a higher level of computer and Internet literacy, there is a higher possibility of higher information literacy, as demonstrated by the participants’ more effective use of the Internet to seek information and knowledge. The more highly computer and Internet
literate participants would utilize the Internet more frequently for their schoolwork, even though they might not be highly information literate.

Sharon (2005) indicate that access to and use a home computer, computer area in classrooms, child/computer ratio, software, and computers in school were positively correlated with AA. In addition, frequent use of software for literacy, math, and games was positively correlated with AA during kindergarten. High achievers were found to use software for literacy and math more frequently than both low and average achievers during kindergarten.

Mabawonku (2004) revealed that 62.3% of respondents had never used video recordings while about 55.6% indicated that they had no access to audio-recordings. 6.8% always use the Internet resources while 79% used the computers regularly and 2.9% always used CD-ROM.

Choi et al. (2004) showed that results of internet use were that 99 percent of Korean, 85 percent of the Netherlands, 52 percent of US users had broadband access. Attitudes of expectation and positive evaluation of the Internet were associated with Internet use and motives. The eight factors examined were: seeking information, online companionship, diversion, self-improvement, escapism, self-expression, peer pressure, and offline companionship. The third factor “diversion” was described as passing time, having fun, relaxing or finding excitement. The fourth factor was self-improvement which included gaining respect from people, not falling behind in the future, or developing an interest in new things. Escapism, amusement or self-expression, peer pressure, and offline companionship were the rest of the factors. All 55 eight factors explained 66 percent ($r^2 = .658$) of the variance in Internet usage. Students were seeking information ($r^2=.153$) and online companion ($r^2=.14$). They concluded that when students were motivated to use the Internet, they gained satisfaction which kept
the students returning. The motives for Internet use are diverse. Internet users have their own motives. People spend time on the Internet for study and enjoyment. However, those that do not or cannot regulate themselves may not recognize that they spend an inordinate amount of time accomplishing very little.

Gross (2004); Haythronthwaite & Wellman (2002); Morahan-Martin (1998); Subrahmanyam et al. (2001) indicated that boys tend to spend more time alone online than girls engaged in gaming.

Jennings & Wartella (2004); Lenhart et al. (2005) and are more likely to be involved in other online social interactions, such as using e-mail, than are boys. How email is used also differed by gender. For example, girls tend to use e-mail to exchange small talk and engage in relationship-building communications and boys tend to use e-mail for instrumental communication.

Ramirez (2003) revealed that there was a growing interest in digital reading and that a significant percentage of the surveyed students increasingly depended on the Internet for their school-related activities because it was easy and fast.

LaRose, Lin, and Eastin (2003) reported that average time spent on the Internet on a weekday was 89 minutes and on a weekend day was 69 minutes. The results showed a direct relationship between Internet usage and deficient Internet self-regulation and Internet self-efficacy. They called it unregulated Internet usage when the users do not manage their Internet use time, or they have a problem using the Internet productively.

Scealy, Philips and Stevenson (2002) showed that the participants' average use of the Internet per month was for email (11.30 hours), work/study (9.58 hours), and buying products (0.83 hours). Shy males were likely to use Internet for
recreation/leisure. Males with high academic attainment were more likely to use the Internet for banking/paying bills. Internet use was not predicted by shyness, anxiety, gender and academic attainment.

A study conducted by Rowland and Rubbert (2001) revealed that 12% of their respondents did not have Internet access at home and only 3% made no use of the Internet at all and over 75% of the respondents were familiar with search engines. The use of information resources for independent study and learning makes the distance learning degree programme of the same standard and quality like the regular/full-time programme.

McCoy (2001) showed that 95 statements about computer competencies that should be included in business teacher education curricula. These competencies were grouped in five categories: computer hardware, software, computer programming, computer integration, and general computer knowledge.

Bakay (2001) revealed that There are significant differences between students IC scores and their individual characteristics, such as the type of high school they are enrolled in, where these high schools are located (center or suburb), and their Internet access conditions such as, having computer at home or not, being subscribed to an Internet company or not, where they connect, how they have learned and how much time they devote to Internet weekly, the most preferred activities on the Internet, their level of English and if they are visiting Internet cafes or not. There are no significant differences between student's IC scores and their individual characteristics such as sex, age, and grade and study area.

Young (2001) observes that discussions of Internet use behavior help expand students' understanding of the implications of the new technology. There were many
risks such as free and unlimited Internet access, unstructured time, freedom from parental control, no online monitoring, escaping from the academic stress, etc. Additionally Young describes the effects of the Internet addiction. Those reactions were declining grades, less investment in relationship with friends, general irritability when off-line, and lying about the time they spent online. Young suggests that educating administrators and faculty on the dynamics of Internet abuse can raise awareness and help prevent addiction throughout the campus system. Implementing resident life educational programs is to address students' Internet addiction. Encouraging students to seek counseling when Internet-triggered problem arise is one of solutions. Additionally, the importance of their participation in the social clubs or Organizations the campus offers can be emphasized. Finally, the counselors can discuss cyber-behavior to help expand students understanding of the implications of the Internet and computer.

LaRose, Mastro, and Eastin (2001) revealed that there were positive correlation between Internet usage and the expected positive outcomes such as activity outcomes, pleasing sensory outcomes, novel sensory outcomes, and social outcomes. There were negative correlations between Internet usage and the expected negative constructs such as negative outcomes, self-disparagement, and self-slighting. Internet addiction was positively correlated with Internet usage. Internet self-efficacy was highly correlated to Internet usage. Internet use was predicted, using a multiple regression with the predictors, Internet self-efficacy, perceived addiction, activity outcomes, and self-disparagement at an alpha level of p < .05. The results suggest that users with high self-efficacy access the Internet confidently, and users with perceived addiction use the Internet more than others. They interpreted the results to mean that a person with Internet addiction is deficient in Internet self-regulation. Another factor influencing Internet use is anxiety.
Reisberg (2000) suggested that the colleges' action should be to find a way to monitor or restrict the amount of the time of students' Internet use because Internet dependence could lead to class absence and social isolation or other severe outcomes.

Jupiter Communications (2000); Subrahmanyam et al. (2001); Kraut et al. (1996) revealed girls use text messaging more frequently than boys.

Young (1996) indicated that over 80 percent of the dependent group used the Internet less than 1 year but over 70 percent of the non-dependent group used the Internet over 1 year. Over 78 percent of the dependent Internet users spent time for chatting, multi-user games, and news groups while over 79 percent of the non-dependent Internet users spent their time on email, www, and database search. The problems of the Internet use were usually academic, financial, and occupational. The result revealed that even though the students had a strong research tool, they experienced academic problems due to surfing irrelevant web sites. Despite the negative impacts of the dependence on the Internet, 54 percent of the dependent Internet users did not have the intention to reduce their time spent on the Internet. Pointing out the limitations and bias of the sample, Young suggested that non-dependent Internet users may not recognize their Internet addiction and they feel no need to diagnose their status of Internet use.

2.3 STUDIES ON ACADEMIC ACHIEVEMENT

Devi and Mayuri (2003) indicated that girls were superior to boys. Family factors like parental aspirations and socio economic status significantly contributed to AA.
Budhdev (1999) indicated that AA of the children of working mother was greater than the children of non-working mothers.

Patel (1997) showed that parental income, occupation and education had a large impact on the AA. Pal, Natarajan & Pradhan (1996) revealed that mathematics competence of urban students was positive and significant relationship between father’s education and mathematics competence. Urban students whose fathers had higher educational status performed better in mathematics. Chowdhary and Muni (1995) reported that parental support had positive effect on their children academic performance.

Singh and Singh (1995) investigated the study habits of advantaged and disadvantaged college students. Based on socio economic status criteria family income, education and occupation of the parents, caste, rural urban residence 150 advantaged and 150 disadvantaged male college students were identified. The chi-square test indicated significant difference between two groups. The advantaged group compared to disadvantaged group, had better study mechanisms, regularity in study, attentiveness in the classroom and habit of seeking help from teachers and classmates.

Sputa and Paulson (1995) showed birth order and family size influence adolescent AA. Mehta and Malhotra (1993) revealed that study habits and study attitudes were the important predictors of AA. Misra (1992) revealed that significant and positive correlation between study habits and AA. Panda (1992) indicated ‘F’ value for sex significant difference. From the mean values, it was revealed that boys had significantly better study habits than girls.

Wangoo and Khan (1991) revealed that governmental and private (Pvt.) school students differed significantly, as far as their socio economic status is concerned.
Significant difference in AA was found between students from Pvt. and governmental schools. The relationship between AA and socio economic status when computed on total sample was statistically significant.

Ramaswamy (1990) revealed significant relationship between the study habits and AA variables. Verma and Sinha (1990) indicated that Cognitive ability, AA and study habits were definitely affected by social disadvantage. Socially advantaged group exhibited higher levels of intelligence, AA and good study habits.

Sundaram (1989) revealed that there was a significant (0.01) difference between urban and rural students in their self-concept. The rural students had higher self-concept than urban students. But there was no significant difference between urban and rural students with respect to study habits. Grewal (1985) revealed that academic performance was influenced by socio economic status of the subjects.

Agarwal (1983) indicated that males had a greater predisposition to better study habits, neuroticism, extroversion, favorable parental attitude and a better ideal self than females. However, females showed a higher reading ability and AA than males. There were significant and positive correlations in both males and females between reading ability and their study habits. Raj and Krishnan (1980) revealed that the correlation between AA and family size was negative and significant.

2.4 CONCLUSION

The review of the studies related to the present study indicated the following:

Research studies on SRLS and IC seems to be scanty in India, and it demands more research in this area.
Many studies revealed that there is significant relationship between SRLS and AA (Van Den Hurk, 2006; Pintrich and De Groot, 1990; Núñez et al., 2011; Harring-Hendon, 1989; and Mcghee, 2010); relationship between IC and AA (Lim, 2005); and no relationship between IC and AA (YangKim, 2009; Adegoke, 2013; Puzziferro, 2008; and Jackson et al., 2006);

There are not many studies on Internet Competency as such, but there are certain studies on Internet literacy, Internet use etc, which in directly speaks of IC. Both in India and Abroad, much research is to be promoted in this area. Considerable research has been reported on SRLS indicating relationship between SRLS and many other variables like: Internet use and AA (YangKim, 2009); learning computer concepts (Chen, 2002); academic performance (Robert Cobb, 2003); use of goal analysis forms and evaluation and management forms (Anderton, 2006); achievement in learning English (Wang et al., 2009); conscientiousness, achievement (Eilam et al., 2009); autonomy support (Schuitema et al., 2011), difference between men and women in SRLS etc, which formed the base for the present study. Further, not many studies are found in relation to SRLS and IC among the college students in Indian literature. Thus, it is found imperative to attempt the present study.