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The Relationship between Collaboration in Learning, Quantity and Timing of Feedback, and Self-Efficacy of Students in Higher Education

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ABSTRACT

The purpose of this study was to identify the effect of collaboration in learning, and the quantity and timing of feedback towards the enhancement of self-efficacy among students in a public university in Malaysia. Data was collected using a survey questionnaire. The questionnaire was distributed to a total of 500 randomly selected tertiary students. A total of 475 questionnaires were returned and used for analysis. Data was analysed with both descriptive and inferential st atistics. The findings revealed that most of the students collaborate with peers in their learning. Feedback that was identified has a positive and significant relationship with student self-efficacy. A moderate, positive and significant correlation has been identified between collaboration in learning, quantity and timing of feedback and self-efficacy among the students in a public university. However, collaboration in learning and quantity and timing of feedback only induced a low effect size on self-efficacy.

Keywords: *collaborative learning, feedback, self-efficacy, higher education*

INTRODUCTION

Prince (2004) believes that Collaborative Learning *includes a*ny instructional approach where students work together in small groups with a common objective. Therefore, it can be assumed that collaborative learning encompasses all group-based instructional approaches, inclusive of cooperative learning. However, some scholars make a distinction between collaborative and cooperative learning in terms of their divergent historical developments and distinct philosophical backgrounds. Nevertheless a common strand in both distinctions is that collaborative learning and cooperative learning also highlight the importance of student interactions in learning, instead of solitary individual activity. The most prevalent model of cooperative learning sited in the engineering literature is that of Johnson, Johnson and Smith (1998). This model integrates five specific tenets, namely: individual accountability, mutual interdependence, face-to-face primitive interaction, appropriate practice of interpersonal skills, and regular self-assessment of team functioning.

While different cooperative learning models exist, the core element held in common is a focus on cooperative incentives rather than competition to promote learning (Prince, 2004). According to Wikipedia.org (2014), in active learning, it is common place for teachers to plan activities for students in small groups (also termed as "cooperative learning.") In this approach, typically teachers organize small group activities for students to undertake and complete specific tasks together. For instance, students could be engaged in solving Math problems or discussing issues concerning literature, etc. In this circumstance, groups could be engaged in a similar task or they may be assigned different tasks. Small group activity can be conceptualized in techniques such as Think-Pair-Share. This technique can be instrumental in helping instructors organize content, track students' performance and saves time for the instructor as they can move on to the next topic. Most importantly, it is a technique that engenders interactive learning among students (Radhakrishna, Ewing & Chikthimmah, 2012). There are three ways instructors can apply collaborative learning in their classroom:

- Create learning cells occupied by pairs of students who take turns to ask and answer questions based on material that both have read. Learning cells are an effective technique for students to learn and progress together (Radhakrishna, Ewing & Chikthimmah, 2012).

- Following instructor explanations or lecture, stop and ask students to prepare a brief review of the lecture or explanations in one minute. This technique is aptly called the one minute paper and is an effective way of reviewing materials and obtaining feedback.

- Establishing collaborative learning groups is a great way to introduce diverse learning materials in different classes. In this technique students are assigned to groups of 3-6 students who work together on a task. Each group establishes its own leader and scribe who help ensure that they keep to their objective or target. This is a prime example of active learning where students working together, continuously revise their work (McKinney, 2010).

In order to induce participation and draw on the wisdom of all the learners, it is imperative that the classroom seating arrangement is flexible enough to allow for the creation of small groups (Bens, 2005) for collaborative learning.

A. Quantity and Timing of Feedback

Boom, Paas and Merrie¨nboer (2007) stated that, with regard to feedback it is important to identify and name the source of the feedback. In educational settings, feedback is usually provided by teachers (it refers to lecturers in this study). Many researchers have found that the most effective feedback is timely, specific and tied to explicit criteria. Teachers adjust their feedback strategies to meet different needs identified in the assessment. Teachers' feedback has proven to be adequate (Chi, 1996) and they are often sought as a favorable source of external feedback anticipated to reinforce the effect of reflection. With regards to SRL (self-regulated learning), teachers are deemed better prepared in providing feedback in comparison to student peers (Boom, Paas & Merrie¨nboer, 2007). Teachers are more neutral and objective in their feedback, while student peers, due to their emotional attachment may provide feedback which is less direct and concrete (Nilson, 2003). Nevertheless, there are studies which have indicated that peer feedback has its inherent effectiveness (Bangert-Drowns, Kulik, Kulik & Morgan, 1991). In the present study, peers were used as a secondary resource for external feedback. This study has also undertaken to identify the impact of peer feedback and teacher feedback.

E-learning provides opportunities for feedback to be channeled by the lecturers through e-mails and discussion boards or automatically by the software (Krause, Stark & Mandl, 2009) or learning management systems. Automatic feedbacks are economical and effective in reaching out to students with immediate feedback. Therefore it is highly recommended in institutions with large student populations and scarce resources. Furthermore, e-learning accords the possibility of choosing between standardized feedback to all students (e.g., knowledge of right answer) or adaptive feedback (feedback is adapted to students' answers) (Sales, 1993). This is made possible by incorporating adaptive (Gielen, Peeters, Dochy, Onghena & Struyven, 2010) and heuristic technologies which are capable of providing varying amounts of feedback and this seems to be associated to their effectiveness in enhancing performance (Narciss & Huth, 2006).

The elaboration provided in feedbacks often initiates a learning effect on students. This effect coupled with the presence of explanations enhances collaborative learning (Webb, 1991). Notwithstanding of the differences in the amount, substance and style of feedback (i.e., volume and type of information), and the learning processes that are anticipated (i.e. viewpoints on how feedback encourages learning), the findings accrued from traditional feedback studies, however, can always be regarded as accurate.

Webb (1991) stated that in order to give metacognitive feedback, the tutoring system must be able to detect metacognitive errors in real time, without interrupting the learning process. This was done by evaluating students' actions using a metacognitive computational model of help seeking behavior (Webb, 1991). The help-seeking model evaluates help-seeking behaviors in a tutored step-based problem-solving environment such as the Geometry Cognitive Tutor. Unlike other models of help seeking that have been put forward in the literature (Webb, 1991), this model is comprehensive in categorizing individual actions as either help-seeking desired or undesired actions. Webb (1991) provides a thorough comparison of the model in relation to other frameworks.

B. Self-efficacy

Self-efficacy refers to beliefs in one's ability to organize and carry out a course of action required in attaining certain out lined objectives (Bandura,

1997). Zimmerman (1990) described perceived self-efficacy as personal evaluation of a person's ability to organize and execute a course of action to attain designated goals, and he sought to assess its level, generality, and strength across learning processes and contexts. Self-efficacy generally, refers to one's self-evaluation about one's capability to consolidate thoughts, feelings, and actions to produce a preferred outcome (Torres & Solberg, 2001; Bandura, 1986). Academic self-efficacy, particularly, signifies confidence in carrying out academic tasks such as reading textbooks, posing questions in class, and priming for examinations (Solberg, O'Brien, Villarreal, Kennel & Davis, 1993). Bandura (1994) believes people's perception about their efficacy can be enhanced by four main sources of influence. Mastery experiences are known as the first method to create the most successful forms of efficacy in learning. Learning events that results in a success help leads to a strong belief in one's personal efficacy while any experience of failure results in an erosion. Failures are detrimental, especially if it occurs before a strong sense of efficacy is formed. People who are exposed to easy success and quick gratification are easily disheartened by failure. Building a strong sense of efficacy requires life experiences that involve the surmounting of difficulties with a persistent effort.

The second method of building a strong sense of self-efficacy is by observing the life experiences of social models (Bandura, 1994). Observing others from a similar status, achieve success through persistent effort, kindles an observer hopes that they too can achieve success by mastering certain abilities that lead to success. However, in the same sense observing others fail despite persistent hard work has a detrimental effect to one's own sense of self-efficacy and any prior effort may lose its worth. The effect of a model on self-efficacy depends largely on the observers' perceived proximity to the model. The impact of modelling on perceived self-efficacy is strongly influenced by the observers' perceived correspondence to the models. The influence of a model goes beyond the provision of social standards against which observers can measure their own abilities. Observers select models who display the abilities that they themselves aspire to achieve. Competent models by way of their displayed life style and thoughts convey meaningful skills and strategies to observers on the means of maneuvering environmental anxieties. Acquiring effective means elevates the value of perceived self-efficacy.

A third method of enhancing people's perception that they are endowed with all the skills to succeed is social persuasion (Bandura, 1994). People can be persuaded verbally to belief that they possess the skills to master certain abilities which would set them on the road to success. Such people work harder on a sustained basis and are more successful in solving problems, in comparison to those who continue to verify their own abilities and dwell on self-pity. Social persuasion works as a boost in persuading people to strive harder in pursuing success. They augment the acquisition of skills and promote the development of personal efficacy.

It is more difficult to instill high beliefs of personal efficacy by social persuasion alone than to undermine it. Unrealistic boosts in efficacy are quickly disconfirmed by disappointing results of one's efforts. However, people who have been dissuaded from believing in their own abilities develop an inferiority complex that drives them away from challenging experiences which hold the potential for learning and growth and often give up easily when faced with difficulties. The role of effective efficacy builders goes beyond the task of providing positive reviews (Bandura, 1994). Apart from raising people's self confidence in their own abilities, they construct situations with ample opportunities for success and avoid involving them in untimely placements where the chances for failure is high. The basis for success is self-improvement and not triumphs over others.

A fourth method of improving self-beliefs of efficacy is by reducing people's reaction to stress and modifying their negative emotional inclinations and misconceptions regarding their somatic conditions. In stress inducing situations, the intensity of the emotional and somatic reactions is not as important as the perceptions and interpretations regarding it. Among people who have a higher sense of self-efficacy there is a tendency to view emotional situations as a catalyst or challenge for better performance. On the other hand people who are plagued by self-doubts often regard affective arousals in a debilitative sense. Somatic markers of efficacy play a significant part in preserving health, athletic and other physical endeavors.

C. Enhancing Learning through Self-efficacy

According to Dinther, Dochy & Segers (2011), self-efficacy as a key element of social cognitive theory, appears to be a significant variable in student learning, because it affects students' motivation and learning (Pajares, 1996a). Standardized tests and answer schemes have a tendency to decrease students' self-efficacy in learning science if they construe scientific as uncertain or ambiguous. This result is consistent with the reference (Qian & Pan, 2002) study that sophisticated epistemic beliefs, believing in the uncertainty of scientific knowledge, may contradict the requirement of standardized tests. Tsai (2004) implies that the conception of "Testing" may cause many Taiwanese students to connect their learning, and thus their self-efficacy, with their test scores, leading to the counter intuitive result that students who consider scientific knowledge as certain may display better performance on tests and as a consequence achieve higher self-efficacy of learning science, while those who consider scientific knowledge as ambiguous may perform negatively on standardized tests which in turn contributes to low self-efficacy. Self-efficacy for learning has a positive correlation with students' rate of solving arithmetic problems (Schunk, Hanson & Cox, 1987). Salomon (1984) has further indicated that self-efficacy is positively related to self-rated mental effort and achievement while students learn from text material that was thought to be problematic. Regarding the impact of perceived self-efficacy on persistence, path analyses has indicated that it influences students' skill acquisition both directly and indirectly by increasing their persistence (Schunk, 1981). The direct effect indicates that perceived self-efficacy influences students' methods of learning as well as their motivational processes. These results validate the mediational role that self-efficacy plays in motivating persistence and academic achievement. In a meta-analytic review of nearly 70 studies of persistence and rate measures of motivation, reference (Solberg & Villarreal, 1997) found a significant positive effect size of students' self-efficacy beliefs. Besides, Torres and Solberg (2001) posit that self-efficacy directly influences college stress. Academic self-efficacy reduces stress by increasing the resources a person have available to manage a given activity (Solberg, Gusavac, Hamann, Felch, Johnson, Lamborn & Torres, 1998). Among Latino college students, the correlation between academic self-efficacy and stress was reported as .58 (Solberg & Villarreal, 1997). Academic self-efficacy is expected to lead to social integration (Solberg,

Gusavac, Hamann, Felch, Johnson, Lamborn & Torres, 1998). Among Latino students, the correlation between academic self-efficacy and social integration ranged between .40 and .39 in another study (Hamann, 1997).

RESEARCH METHOD

The study was conducted at the Faculty of Education in a public university in Selangor, Malaysia. Data were collected using a survey questionnaire. A total of 92 diploma students, 213 undergraduate students and 156 postgraduate students have responded to the questionnaire. The researchers distributed and collected back the questionnaire in a semester. The questionnaires used a 5-point Likert-scale to gauge the perception of students towards the practices of collaboration in Learning, Feedback and Self Efficacy in higher education. Both descriptive and inferential statistics were used to analyse the data. Besides that, Cronbach's Alpha test was conducted to analyse the reliability for each variable. The Cronbach's Alpha result for each variable was shown in Table 1:

Table 1: Reliability Analysis

No.	Variable	Cronbach's Alpha	No of Items
	Collaboration in Learning	0.728	9
	Quantity and Timing of Feedback	0.673	9
	Self-efficacy	0.950	7

FINDINGS

Demographic Factors

Data analysis showed that 21.7% were males while 78.3% were females. In terms of ethnicity, 96.3% were Malays, 1.1% were Iban, 0.9% were Kadazan, and others 1.8%. Majority of the respondents were pursuing a Bachelor's Degree (46.2%), followed by Master's Degree students (33.8%) and lastly Diploma students (20.0%). Table 2 shows the mean for the current CGPA of the respondents as 3.36 while the standard deviation was .27.

Table 2: Descriptive Analysis of Current CGPA

Descriptive Statistics	N	Mean	Std. Deviation
Current CGPA	355	3.36	.27

Table 3: Descriptive Statistics of Collaboration in Learning

Collaboration in Learning	Mean	Std. Deviation
collaborate with my peers	4.11	.73
spirit of cooperation	4.03	.78
take opportunity to exchange ideas	4.00	.75
creativity and critical thinking enhanced	3.99	.82
coordinate with individuals and groups	3.97	.71
enjoy working with peers	3.89	.95
use problem-solving techniques	3.84	.80
do better in individual assignment	3.53	1.09
'passengers' within my team	3.06	1.22

The result portrayed in Table 3 showed that the student collaboration with peers has the highest mean compared to others (m=4.11, SD=.73). Followed by spirit of cooperation (m=4.03, SD=.78) and take opportunity to exchange ideas (m=4.00, SD=.75). The respondents did agree that their creativity and critical thinking enhanced (m=3.99, SD=.82) and they enjoy working with peers (m=3.89, SD=.95).

Table 4: Descriptive Statistics of Quantity and Timing of Feedback (N=473)

Quantity and Timing of Feedback	Mean	Std. Deviation
Learn more if receive feedback	4.00	.83
Lecturer provides more verbal feedback	3.91	.81
Get feedback from peers	3.69	.95
Receive prompt feedback	3.63	.91
Plenty of feedback on how I am doing	3.56	.94
Appreciate more written feedback	3.44	1.06
Less useful when receiving delayed feedback	3.28	1.11
Hardly receive feedback	2.91	1.10
Receive less guidance	2.70	1.10

Table 4 showed that "students learn more if they receive feedback" (m=4.00, SD=.83). Followed by "lecturer provides more verbal feedback" (m=3.91, SD=.81) and the respondents did "get feedback from peers" (m=3.69, SD=.95). However, the respondents were reluctantly to agree that they receive "prompt feedback" (m=3.63, SD=.91) and "plenty of feedback on how they are doing" (m=3.56, SD=.94).

Table 5: Descriptive Statistics of Self-efficacy (N=473)

Self-efficacy	Mean	Std. Deviation
Enhance learning capability	4.21	.69
Develop self-concept	4.19	.70
Increased motivation	4.18	.74
Enhance self-esteem	4.17	.75
Enhance confidence	4.17	.73
Guided control learning progress	4.16	.73
Enable self-regulate	4.16	.74

Table 5 showed that students have enhanced their learning capability (m=4.21, SD=.69), followed by "developing students' self-concept" (m=4.19, SD=.70), "increased students' motivation" (m=4.18, SD=.74), "enhanced self-esteem" (m=4.17, SD=.75) and "enhanced confidence" (m=4.17, SD=.73).

Table 6 shows the correlation between collaboration in learning, quantity and timing of feedback and self-efficacy. The Pearson Product Moment Correlation results in Table 6 showed that that there was a moderate, positive and very significant relationship between collaboration in learning and self-efficacy ($r=.496$, $p<.01$). There was also a moderate, positive and very significant relationship identified between quantity and timing of feedback and self-efficacy ($r=.306$, $p<.01$).

Table 6: Correlation between Collaboration in Learning, Quantity and Timing of Feedback and Self-Efficacy

Variables		Collaboration in Learning	Quantity and Timing of Feedback	Self-Efficacy
Collaboration in Learning	Pearson Correlation	1	.419**	**.496****
	Sig. (2-tailed)		.000	.000
	N	465	458	460
Quantity and Timing of Feedback	Pearson Correlation	.419**	1	**.306****
	Sig. (2-tailed)	.000		.000
	N	458	466	462
Self Efficacy	Pearson Correlation	.496**	.306**	1
	Sig. (2-tailed)	.000	.000	
	N	460	462	469
**. Correlation is significant at the 0.01 level (2-tailed).				

Table 7: Multiple Regression

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.509[a]	**.259**	.256	.54798	1.867
a. Predictors: (Constant), Quantity and Timing of Feedback, Collaboration in Learning					

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.415	2	23.707	**78.950**	**.000[b]**
	Residual	135.429	451	.300		
	Total	182.843	453			
a. Dependent Variable: Self-Efficacy						
b. Predictors: (Constant), Quantity and Timing of Feedback, Collaboration in Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	**1.489**	.221		6.727	.000
	Collaboration in Learning	.557	.056	**.440**	9.883	**.000**
	Quantity and Timing of Feedback	.161	.055	**.132**	2.952	**.003**
a. Dependent Variable: Self-Efficacy						

The relationship between the variables in multiple regression analysis for the study was proposed as:

$$\mathbf{y = 1.489 + .440x_1 + .132x_2}$$

y= self-efficacy

x_1=collaboration in learning

x_2=quantity and timing of feedback

R-Square (R^2) is the proportion of variance in the dependent variable which can be predicted from the independent variable. From the Table 7, the R^2 value of .259 implies that 25.9% of the variance in the "self-efficacy" scores can be predicted from the "collaboration in learning" and "quantity and timing of feedback". The ANOVA result ($F=78.950$, $p<.01$) further confirmed the significant contribution of "collaboration in learning" and "quantity and timing of feedback" toward the formation of self-efficacy among students in higher education.

DISCUSSION

From the findings obtained, the results show that students tend to agree that collaboration in learning help them in their studies. Prince (2004) states that cooperative learning as a structured form of group work where students pursue common goals while being assessed individually. This collaborative learning enables students to learn because they allow students the chance to take a position and gather information to support their view and explain it to others. Besides, students also tend to agree that the quantity and timing of feedback improve their learning. Chi (1996) supported the findings in this study that that lecturer feedback has proven to be sufficient and they are often required as a promising source of the external feedback intended to reinforce the impact of reflection in learning. In terms of self-efficacy, the results show that students tend to strongly agree that their self-efficacy have increased. Schunk (1981) further supported the multiple regression analysis in this study that the effects of recognized self-efficacy on perseverance, path analyses have shown that students' skill influence the acquisition both directly and indirectly by increasing their perseverance. Hence, if students collaborate in learning, and receive adequate feedback to enhance their learning, they tend to have higher self-efficacy. The correlation results also show that all the three variables did have a weak to moderate relationships among themselves.

CONCLUSION

Torres and Solberg (2001) indicated that stronger academic self-efficacy leads to better college outcomes because students with higher self-efficacy

perceive failed experiences as challenges rather than threats (Dinther, Dochy & Segers, 2011). Besides that, academic self-efficacy was also found contributing to increased participation in social activities and discussions with faculty. As these performance attainments result in positive outcomes, self confidence improves the likelihood that these students will feel connected to their environment (Hamann, 1997). Moreover, students with higher academic self-efficacy also indicate a higher rate of persistency (Karpanty, 1998) in learning. When students perceive difficult college tasks as challenges, this kind of self-efficacy will strengthen college students' self-efficacy and lower their academic stress, and maintain psychological and emotional health (Solberg, Gusavac, Hamann, Felch, Johnson, Lamborn, & Torres, 1998). As a mediating variable in training studies, self-efficacy was known to react positively to advance students' learning and as a predictive of achievement outcomes. These empirical findings of its relevance as a significant arbitrator of students' academic progress and motivation confirm educators' belief that students' self-belief about their academic abilities does play a crucial role in propelling them towards success.

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REFERENCES

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behaviour, 4,* 71-81. New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).

Bandura, A. (1997). *Self-efficacy: The Exercise of Control*. New York: Freeman.

Bangert-Drowns, R. L., Kulik, C. C., Kulik, J. A. and Morgan, M. T. (1991). The instructional effect of feedback in test-like events. *Review of Educational Research, 61*:213-238.

Bens, I. (2005). *Understanding participation. In Facilitating with ease! Core skills for facilitators, team leaders and members, managers, consultants, and trainers,* 2nd ed., pp. 69–77. San Francisco: Jossey Bass.

Boom, G.V.D, Paas. F. and Merrie¨nboer, J. (2007). Effects of elicited reflections combined with tutor or peer feedback on self-regulated learning and learning outcomes. *Learning and Instruction, 17*:532-548.

Chi, M. T. H. (1996). Constructing self-explanations and scaffolded explanations in tutoring. *Applied Cognitive Psychology, 10*:33-49.

Dinther, M.V., Dochy. F. and Segers. M. (2011). Factors affecting students' self-efficacy in higher education, *Educational Research Review, 6*:95-108.

Gielen, S., Peeters, E., Dochy, F., Onghena, P. and Struyven, K. (2010). Improving the effectiveness of peer feedback for learning. *Learning and Instruction, 20*(4):265-348.

Hamann, T. (1997). *The role of college self-efficacy in the relationship between family support and social integration for students from different racial/ ethnic backgrounds*. Unpublished master's thesis, University of Wisconsin–Milwaukee.

Johnson, D., Johnson, R. and Smith, K. (1998). *Active learning: Cooperation in the college classroom*, 2nd ed. (Edina, MN: Interaction Book Co,.)

Karpanty, R. E. (1998). *Role of communication apprehension, college self-efficacy, peer integration and faculty integration on college persistence.* Unpublished master's thesis, University of Wisconsin–Milwaukee.

Krause, U.M, Stark, R. and Mandl. H (2009). The effects of cooperative learning and feedback on e-learning in statistics. *Learning and Instruction, 19*:158-170.

McKinney, K. (2010). *Active learning.* Illinois State University, Center for Teaching, Learning & Technology.

Narciss, S. and Huth, K. (2006). Fostering achievement and motivation with bug-related tutoring feedback in a computer-based training for written subtraction. *Learning and Instruction, 16*:310-322.

Nilson, L. B. (2003). Improving student peer feedback. *College Teaching, 51*:34-38.

Pajares, F. (1996a). Assessing self-efficacy beliefs and academic outcomes: The case for specificity and correspondence. Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Pajares, F. (1996b). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*:543–578.

Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education, 93*(23):223-231.

Qian, G. and Pan, J. (2002). A comparison of epistemological beliefs and learning from science text between American and Chinese high school students. In B. K. Hofer, & P. R. Pintrich (Eds.), *Personal epistemology: The psychology of beliefs about knowledge and knowing*, 365-385. Mahwah, NJ: Erlbaum.

Radhakrishna R., Ewing J. and Chikthimmah N. (2012). Engage to Excel, *NACTA Journal, 56*(3).

Sales, G. (1993). Adapted and adaptive feedback in technology-based instruction. In J. V. Dempsey, & G. C. Sales (Eds.). *Interactive instruction and feedback,* 159-175. Englewood Cliffs, NJ: Educational Technology Publications.

Salomon, G. (1984). Television is "easy" and print is "tough": The differential investment of mental effort in learning as a function of perceptions and attributions. *Journal of Educational Psychology, 76*:647–658.

Schunk, D. H. (1981). Modeling and attributional feedback effects on children's achievement: A self-efficacy analysis. *Journal of Educational Psychology, 74*, 93–105.

Schunk, D. H., Hanson, A. R. and Cox, P. D. (1987). Peer model attributes and children's achievement behaviors. *Journal of Educational Psychology, 79*:54–61.

Solberg, V. S., Gusavac, N., Hamann, T., Felch, J., Johnson, J., Lamborn, S. and Torres, J. B. (1998). The Adaptive Success Identity Plan (ASIP): A career intervention for college students. *The Career Development Quarterly, 47*:48–95.

Solberg, V. S., O'Brien, K., Villarreal, P., Kennel, R. and Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the College Self-efficacy Inventory. *Hispanic Journal of the Behavioral Sciences, 15*:80–95.

Solberg, V. S. and Villarreal, P. (1997). Examination of self-efficacy, social support, and stress as predictors of psychological and physical distress among Hispanic college students. *Hispanic Journal of Behavioral Sciences, 19*:182–201.

Torres J.B. and Solberg V.S. (2001). Role of self-efficacy, stress, social integration, and family support in Latino college student persistence and health. *Journal of Vocational Behaviour, 59*:53-63.

Tsai, C. C. (2004). Conceptions of learning science among high school students in Taiwan: a phenomenograhic analysis. *International Journal of Science Education, 26*:1733-1750.

Webb, N. M. (1991). Task-related verbal interaction and mathematics learning in small groups. *Journal for Research in Mathematics Education, 22*:366-389.

Wikipedia.org. (2014). *Active learning*. Retrieved on 29 August, 2014, from en.wikipedia.org/wiki/active_learning.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: an overview. *Educational Psychologist, 25*:3-17.