



A Search Strategy to Investigate Factors that Affect Student Achievement in English Writing Courses in Distance Learning Context

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ABSTRACT

The objective of this paper is to explain an approach taken to develop a systematic literature review which was used to identify issues that relate to student achievement and the development of English language writing skills and distance language learning. Since the field of distance learning is very broad, it is necessary to establish a framework for identifying relevant issues. The key words of the subordinate research question were separated and the synonyms for the key words were determined. The key words together with the synonyms were combined. As a result, there were 96 combinations which were categorised into 16 groups. The following step was to determine the databases to search. The CrossSearch provided by the University of Dundee that consisted of Scopus, ASSIA, British Education Index, Australian Education Index, and ERIC was selected. In addition, to obtain more results, Google Scholar was also employed. The combinations were pre-tested with the databases to find out the strengths and weaknesses. Six hundred and three publications were generated from the search. After excluding duplicates, 413 publications remained. In order to identify the most relevant publications to the study, excluding and including criteria was developed to filter the publications further. Eventually, 284 publications were identified which were relevant to the study. The final step was to group the publications based on the issues. The grouped issues were used as a framework to guide the review of the literature.

Keywords: Distance Learning, Systematic Literature Review

1. Introduction

There has been an increasing amount of literatures on distance language learning as the subject began to receive greater attention from researchers in the last ten years (Hurd, 2006). An initial step to understand the issues in distance language learning was undertaken as it was an emerging and developing field of research. A systematic literature review was differentiated from a traditional literature review as it employed a systematic approach to reviewing the literatures related to the subject of the research (Cronin *et al.*, 2008). "Rigor" became the key word that made a distinctive feature of a systematic literature review (Michie and Williams, 2003; Aveyard, 2014). It was expected that a systematic and comprehensive procedure would provide a thorough overview of the literature on distance learning and in particular on distance language learning. A systematic literature review was also expected to help the researcher develop reliable research instruments.

The search for literature which has as its subject the use of a systematic literature review of distance language learning did not generate results. The first 100 results from Google Scholar indicated that systematic literature review were adopted mostly in the medical and healthcare field, such as studies carried out by Smith *et al.* (2011) and (Michie and Williams, 2003). It is hoped that this paper will make a contribution to the field of distance learning, particularly of distance language learning.

1.1. Objective

The objective of the initial search for scholarly resources on distance learning was to obtain more detailed understanding of the issues in distance language learning through systematic procedures to establish a rigorous evidence-based approach.

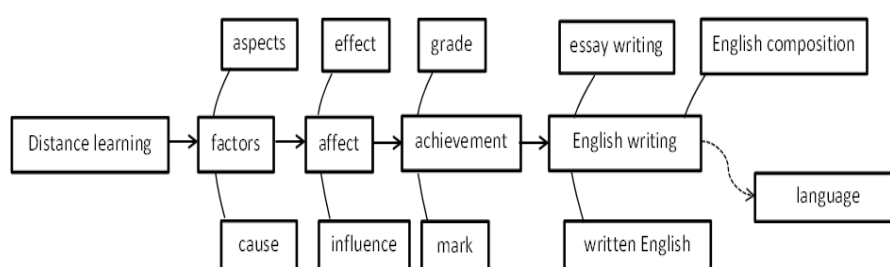
2. Methods

The process designed to select relevant publications is described.

2.1. Establishment of Key Words

The key words were derived from the superordinate research question: What factors that affect student achievement in English writing courses in a distance learning context. The key words are: distance learning; factors; affect; achievement; and English writing. To make the search more comprehensive, related words or synonyms were selected. The words, such as aspect, cause, effect, influence, grade, mark, essay writing, written English, and English composition were included in the search. The reason for including essay writing, written English, and English composition to the search was based upon the initial identification that in some universities in Indonesia, the course names for English writing varied. For example, “Writing” was used by the Department of English language and Literature, Universitas Udayana, Indonesia (Universitas Udayana, 2012), “Composition” was used by the Department of English Literature of Universitas Bung Hatta (Universitas Bung Hatta, 2012), “Essay Writing” was used by the English Programme of Studies of Universitas Padjadjaran (Universitas Padjadjaran, 2012) and also was used by the English Studies Programme of Universitas Negeri Malang (Universitas Negeri Malang, 2012). The concept map of the key words can be seen in the following figure.

Figure-1. Concept map of key words



2.2. Combination Formulations

The key words together with the synonyms were formulated to produce a set of combinations. Distance learning was selected as the primary key word while the other key words were secondary key words. Sixteen group combinations were formed. Altogether, there were 96 combinations. Table 1 shows an example of combination.

Table-1. Key word combination

Combination No. 6			
Primary key word	Secondary key words		
	factors		
	aspect		
Distance learning	cause	achievement	English composition
	affect		
	effect		
	influence		

2.3. Database Selection

After all combinations were generated, the following procedure was to select the electronic databases. The CrossSearch which was consisted of ASSIA, SCOPUS, British Education Index, Australian Education Index, and ERIC provided by the Library of the University of Dundee was used. Three major advantages of using CrossSearch were that multiple databases could be used at the same time, so that it

reduced time consumption, the CrossSearch set the results based upon the rank order, and the CrossSearch displayed not only the titles, but also a link to check the abstracts. To obtain more results, Google Scholar was also used. Google Scholar was used as it generated many more results than the CrossSearch. In addition, Google Scholar displayed the citation counts on the results, so that it was possible to trace the publications cited the results. Since Google Scholar offered abundant result, the search focused on the first 100 results to make the search more manageable.

2.4. Running Initial Tests

Three tests were conducted to examine whether the combinations and the databases generated expected results. The first test aimed to find out if the combinations were able to obtain publications. As a sample, the first combination was selected. The second test aimed to examine whether the databases employed were able to generate good results. The results of the first and the second tests are as follows:

Table-2. Test results

Combination No. 1								
Key words		Databases						
Primary	Secondary	ASSIA	SCOPUS	BEI*	AEI*	ERIC	Total	GS
	factors	30/0	3/1	5/1	26/4	30/7	12	100/10
	aspect	30/0	1/0	1/0	8/2	30/3	5	100/2
Distance learning	cause	30/2	0/0	0/0	2/0	9/2	4	100/12
	affect	30/1	1/0	0/0	6/2	25/6	9	100/1
	effect	30/0	3/0	2/1	18/3	30/6	10	100/1
	influence	30/0	1/0	2/0	0/0	30/2	2	100/1
	Sub-total						42	27
Total						69		
After extraction						55		

*BEI: British Education Index, AEI: Australian Education Index

The number(s) on the left side of the slash were the results retrieved, while the number(s) on the right side indicated that the results were relevant to the study. For example, the combination of “Distance learning AND factors AND achievement” in the Australian Education Index resulted in 26 titles, but four publications were relevant to the study. The third test aimed to check whether the combinations generated different results if the key word arrangement was changed. For example, did “Distance learning AND factors AND achievement” and “factors AND achievement AND Distance learning” obtain different results? The test showed that they generated hardly different results.

2.5. Initial Test Conclusion

Based upon the tests, the combinations and the databases successfully generated results. This meant that the CrossSearch that comprised of ASSIA, SCOPUS, British Education Index, Australian Education Index, ERIC, and Google Scholar were employed as databases to search the publications. In addition, there was no enough evidence that changing the arrangement of the key words generated different results. As a result, the group combinations were still 16 where Distance learning served as the primary key word. Each group consisted of six key word combinations, so that altogether there were 96 key word combinations.

2.6. Identification of Publications

The search with 96 combinations with CrossSearch resulted in 160 titles of publications, while with Google Scholar resulted in 443 titles of publications. The publications included theses, dissertations, journal articles, reports, books, and conference proceedings. The titles of the publications were listed and examined to check their adequacy for the study. The results show that the number of publications increased significantly after 2000. More detailed information about the results was that the period of before 1990 resulted in 26 publications, between 1990 and 1999 were 66 publications, between 2000 and 2009 were 137 publications, and between 2010 up to the present time were 55 publications.

2.7. Result Extraction

A careful examination of the titles of the publications indicated that there were duplicates. The titles were listed alphabetically on the Microsoft Excel page to check duplicates. As a result, after removing duplicates, there were 413 publications that were relevant to the study.

2.8. Selection Criteria For Inclusion and Exclusion

The abstracts of the publications were retrieved in full and pooled. Another procedure was to develop inclusion and exclusion criteria to extract more relevant publications. The inclusion criteria were based upon the following considerations:

- Distance learning
- Distance education
- Language learning
- Higher education level
- Journal articles
- Reports
- Meta-analysis
- Online learning
- Theses
- Dissertations
- Time period: from 1990 up to the present (research based journal articles)
- Methodology: Qualitative, quantitative, and mixed-method designs

Meanwhile, the exclusion criteria considered:

- Conventional/traditional university (face-to-face or in-class learning activities)
- Secondary/Primary education level
- Non-language learning (e.g. Maths, accounting, nursing)
- Methodology: Case study, experimental research designs
- Time period: before 1990 (research based journal articles)

Following the inclusion and the exclusion criteria, the number of publications that were relevant to the study was 284. Whilst a systematic approach has been taken, it was realised that there are other relevant publications that have been missed. Thus, the search will be continued in line with the process of literature review development.

3. Results

Of the 284 titles of publications, there were 63 journal articles discussed student achievement/learning outcomes in particular. A more close attention was given to the articles as they matched the research. Based on the findings, there were some factors that were associated with student achievement. Figure 2 presents the factors that discussed in the articles that related to the student achievement.

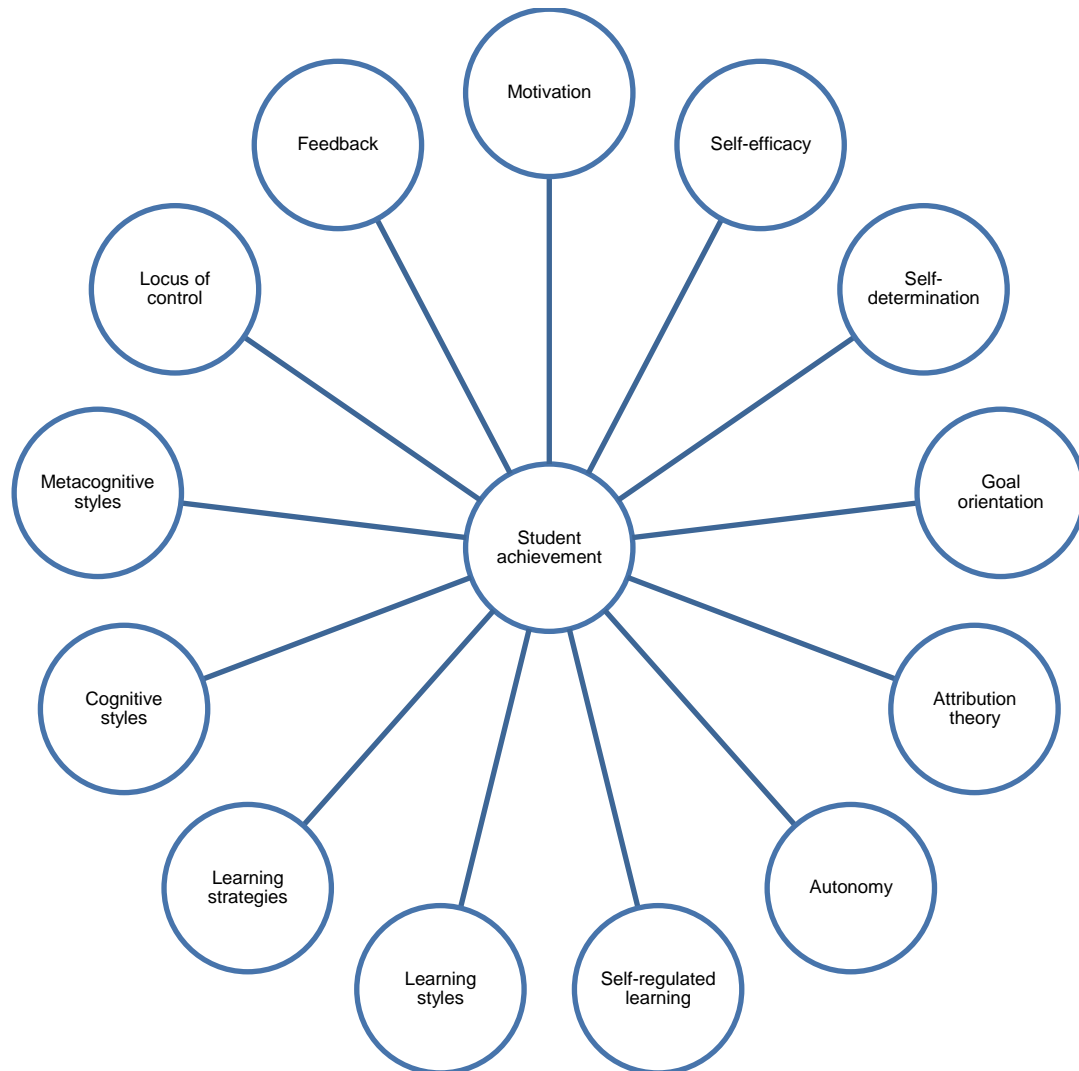
Motivation. In a large longitudinal study, [Hurd \(2006\)](#) who investigated affective factors in distance language learning that involved 500 students of the Open University, UK who took the lower intermediate French course L120 *Ouverture* found that motivation was related to achievement/learning outcomes. Similarly, a more recent study by [\(Wang et al., 2008\)](#) involved 135 adult distance students of Beijing Radio and Television University reported that learning motivation indicated a positive correlation with learning results.

Self-efficacy. In a study investigating the relationship between student characteristics and academic achievement in Anadolu University, Turkey, [\(Ergul, 2004\)](#) pointed out that the correlation between self-efficacy and academic achievement was significant. Recently, in a study which set out to determine the effect of, among others, self-efficacy and achievement on persistence in an online university setting in South Korea, [\(Joo et al., 2013\)](#) found that self-efficacy was a predictor of student achievement.

Self-determination. A survey that conducted by [\(Chen and Jang, 2010\)](#) has shown that self-determination theory did not predict student achievement. Meanwhile, a previous study using a quasi-experimental design by [\(Klein et al., 2006\)](#) involved 600 students of classroom and blended learning courses found that there was a significant correlation between self-determination in terms of intrinsic motivation to study and learning outcomes.

Goal orientation. Through a mixed-method research that involved 318 of distance learning students, (Radovan, 2011) found that strong goals (whether intrinsic or extrinsic goal orientations) could make the students more predictable to pass the examination. Radovan did not specifically mention the subject that the participants took at the university. (Klein *et al.*, 2006) confirmed that the relationship between learning goal orientation and achievement was mediated through motivation to learn.

Figure-2. Student achievement in association with the influencing factors



Attribution theory. (Wang *et al.*, 2008) found that internal attribution had an indirect relationship with student achievement. Attribution was a mediator between self-efficacy and motivation which finally affected the learning outcomes.

Autonomy. In a distance language context, autonomy was an important role as distance language students controlled and manage their learning process (White, 1997). To support White's thoughts, (Vanijdee, 2003) suggested that autonomous language learning students were more resourceful. In a distance learning context, (Hashemian and Soureshjani, 2011) in their study to explore the interrelationship of autonomy, motivation, and academic performance of Persian L2 learners found a significant positive relationship between autonomy and achievement.

Self-regulated learning. (Shin and Kim, 1999) who investigated factors affecting student completion among students of Korea National Open University (KNOU) found a relationship between self-regulation strategies and achievement. It was stated that the study time allocation was significantly affected the achievement in terms of high Grade Point Average (GPA) attainment. (Barnard-Brak *et al.*, 2010) who investigated the existence of self-regulated learning skills and strategies among online learning students found that different self-regulated learning strategies resulted in different student achievement.

Learning styles. (Wang *et al.*, 2008) found that there was a relationship between self-efficacy, learning strategies and learning outcomes. Learning motivation and learning strategies had a positive relationship with learning outcomes.

Learning strategies. (Song and Hill, 2007) argued that “Successful learning in every learning environment involves the use of the effective learning strategies”. (Nugraheni and Pangaribuan, 2006) in their study to investigate learning strategies adopted by students of Universitas Terbuka found that preferences of learning strategies were different among students who registered for different programme of studies.

Cognitive styles. A review of learning strategies in a distance learning context, Pilcher and Miller (2000) reported some interesting findings regarding the relationship between cognitive strategies and achievement, for example (Bernt and Bugbee, 1990) found no significant between cognitive strategies used by the students and the achievement. Similarly, (Radovan, 2011) found there was not enough evidence that characteristics of cognitive strategies influenced learning outcomes.

Metacognitive styles. Metacognitive skills and strategies correlated with students’ ages (Hurd, 2006). In a study to investigate the potential relationship between distance education students’ achievement levels and metacognitive strategies, Jegede *et al.* (1999) found that both low achievement students and high achievement students did not demonstrate imperative use of metacognitive strategies.

Locus of control. (Joo *et al.*, 2013) who investigated the predictors of learner satisfaction, achievement and persistence in an online university in South Korea found that students’ locus of control did not have a significant effect on achievement. In terms of learning initiatives, (Jegede *et al.*, 1999) suggested that compared to low achievers, high achievers were more likely to work harder to reach the maximum results, more confident, more persistent, more committed and seek support.

Feedback. (Hismanoglu and Hismanoglu, 2009) who investigated feedback provision to various students from different programmes at Open Education Faculty of Anadolu University, Turkey, found that feedback promoted students’ self-confidence and helped the student learnt the subjects. (Hyland, 2001) argued that feedback for distance learning students played an important role as it served as a communication means and it could influence the student performance.

4. Conclusions

The measures have been successful in identifying articles that were relevant to the study. The findings of the initiatives provided a better understanding of current issues in distance language learning, especially those issues which were likely to be associated with the student achievement. Factors related to student achievement in the distance learning context were very complex. In other words, success and failure in distance language learning should be seen from different perspectives. The findings indicated that some factors were interrelated, such as self-efficacy and motivation.

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