Self-Directed Learning (SDL) in Higher Education: Practices and Issues

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Abstract - SDL is a fundamental educational goal. However, higher education institutes are challenged when promoting SDL. Therefore, the present study aims to explore existing practices of self-direct learning implemented in the faculty and to identify problems of undergraduates when they are engaging with self-direct learning practices in the faculty.The study reflects that most of the students are familiar with the term self-directed learning. They had experienced with self-direct learning activities of assignments, class presentations conducted by students, group work or group discussions, practical/laboratory classes, field visits/field work, quizzes, tutorial classes, independent research project, e-learning, independent learning, food processing plant, in-plant training/industrial training, viva, and farmer training program.Students express different learning preferences. However, students struggle with some issues when they engage with SDL. The issues are mainly related to course curriculum, teaching process, students' factors, and lecturers' issues.
Keywords: **Self-Directed Learning, Higher Education, Learning Preference, E-Learning, Group Work**

I. INTRODUCTION

As an innovative teaching learning practice, self-direct learning (SDL) has changed the higher educational reform. Therefore, several countries have included the self-direct learning as an educational goal or mission statement (Prabjandee and Inthachot, 2013: 2).Self-direct learning is considered as a core concept in problem-based learning (PBL) and student-centred learning (Silen and Uhlin, 2008: 461). Students are responsible and independent in the learning process to enhance the self-direct learning ability (Silen and Uhlin, 2008: 461). Since learner initiates and takes the responsibility of their own learning activities, self-direct learning is a more effective learning approach (Yang, 2015: 3). Self-direct learning is defined as, in its broadest meaning, 'self-directed learning' describes a process by which individuals take the initiative, with us without the assistance of others, in diagnosing their learning needs, formulating learning goals, identify human and material resources for learning, choosing and implement appropriate learning strategies, and evaluating learning outcomes (Knowles, 1975:18).

The self-directed learner is defined as, A highly self-directed learner, based on the survey results, is one who exhibits initiative, independence, and persistence in learning; one who accepts responsibility for his or her own learning and views problems as challenges, not obstacles; one who is capable of self-discipline and has a high degree of curiosity; one who has a strong desire to learn or change and is self-confident; one who is able to use basic study skills, organize his or her time and set an appropriate pace for learning, and to develop a plan for completing work; who enjoys learning and has a tendency to be goal-oriented. (Guglielmino, 2013:3)

SDL provides opportunity for learners to formulate their learning goals, identify relevant information resources, choose, and implement appropriate learning strategies and evaluate the learning outcomes (Sze-yeng and Hussain, 2010: 1914). Therefore, it is worthwhile to higher education institutes to incorporate self-direct learning activities with the teaching process. This could be achieved at the curriculum designing level. Boud and Higgs (2004: 2) describe that self-direct learning could be promoted through project work, laboratory activities, learning contracts and other learning activities and open-ended assignments. Du (2013: 3) mentions that reflective learning journals, portfolios and study plans are used for promoting SDL. Further, the online self-directed learning facilitates learner autonomy as e-learning (Yang, 2015: 3).

However, higher education institutes are challenged when promoting SDL since education system is not yet transferred to modern environments. Students' restriction to transform from the paradigm of previous teacher-centered learning to student-centered is a major challenge. Moreover, lectures-based classes, interesting to test memorizations rather than understanding, old lecture notes, grading system; large class size and lack of proper guidance for teaching methods are the challenges for enhancing SDL in higher education (Guglielmino, 2013: 10). Stewart (2007: 62) identifies teacher centered learning in secondary schools and heavy workload for students as external barriers for SDL. Teachers are challenged by different levels of SDL competencies, real-life experiences, and familiarity of students on subject when facilitating SDL (Du, 2013: 3). Students are challenged by the lack of knowledge to prioritize their work and difficulties in identifying learning goals (Kusumsiri, 2010: 4). Bandara (2015: 16) identifies that language difficulties, examination pressure and insufficient time allocation for the subject are the main barriers for SDL. Douglass & Morris (2014, 13: 16-22)

identify three themes of facilitators and barriers for self-directed learning; student controlled, faculty-controlled, and administration-controlled facilitators and barriers.

Guidelines have been designed for integrating SDL into the curriculum to facilitate SDL (Guglielmino, 2013: 11). Pre-university study skills preparation and self-directed learning readiness are also important (Warburton and Volet, 2012: 10). Alternative course delivery formats such as online-learning formats (Dynan*et al.,* 2008: 100), educational blogs(Robertson, 2011: 1628, 1631), web 2.0 technology (Kim *et al.,* 2014: 150), web-based learning environments (Senyuvaand Kaya, 2014: 386, 390-391)could be incorporated to enhance SDL. However, enhanced SDL provides space for students to experience SDL activities. It promotes collaboration of peers, shares knowledge, and creates learning communities, encourages better learning, increases learning interests, better performance, motivation for educational experience, lifelong learning skills, participate beyond classroom hours, cost effective learning tool and increases access to course (Amandu *et al.,* 2013: 681-682). Furthermore, collaboration between faculty and librarians is important to enhance the information literacy and self-direct learning (Silen and Uhlin, 2008: 473).

However, in the changing environment, individual must diagnose learning needs, locate learning resources, carryout and evaluate the leaning approach. Change in information technology made the learner characteristics and SDL critically important. Students need to be highly self-directed since traditional teaching learning methods are not sufficient for the changing life, which requires continual learning (Guglielmino, 2013: 13). Developing skills and attitudes toward self-directed learning is not a linear process which requires a transformation,from following orders to self-directed learning activities, from memorizing and repeating to discovering, integrating, and presenting, from listening and reacting to communicating and taking responsibility, from knowledge of facts, terms, and content to understanding [and developing] processes, from theory to application of theory, from being teacher-dependent to being [independent] (Guglielmino, 2013: 5).

However, individuals exhibit different levels of SDL skills when engaging with SDL activities. (Kim*et al.,* 2014: 152). Psychological variables also correlate with SDL (Francis and Flanigan, 2012: 3). Thus, the educational institutions consider learners' individual differences to enhance the self-direct learning approach (Prabjandee and Inthachot, 2013: 1-2). Boud and Higgs (2004: 2) argue that there is a considerable gap between expectations and achievements.

Therefore, the study aims to,
1. Explore existing practices of self-direct learning implemented in the faculty.
2. Identify problems of undergraduates when they are engaging with self-direct learning practices in the faculty.

II. METHODOLOGY

Mixed methods approach with concurrent triangulation design was employed for the present study. The undergraduate students who were immediately completed the degree programme in one of the faculties in the University was selected as the study group. The samples of 146 students were selected for the quantitative approach using simple random sampling. The questionnaire with closed ended questions was administered among the sample. Ninety-eight completed questionnaires were returned within the period of two months. Then data were analyzed using Statistical Package for Social Sciences (SPSS), version 23. Chi square test of independence was adopted to identify significant relationships with significance level of 0.05. If the p value is less than or equal 0.05 (α), it is considered as a significant relationship whereas if p value is greater than 0.05, it is not considered as a significant relationship. When the expected cell counts less than five is greater than 20% in the Chi square output, the likelihood ratio was considered as mentioned by McHugh (2013: 143-149). Further Cramer's value was calculated to determine the strength of the relationship as the questionnaire employed nominal and ordinal data. The strength was determined based on the scale mentioned by Kotrlik *et al.,* (2011, 138). If Cramer's V,

0.00 and under 0.10	Negligible association
0.10 and under 0.20	Weak association
0.20 and under 0.40	Moderate association
0.40 and under 0.60	Relatively strong association
0.60 and under 0.80	Strong association
0.80 and under 0.100	Very strong association

Open ended questionnaire and semi structuredinterview schedule were employed for qualitative approach. Open ended questions were included in the same questionnaire which was used for quantitative approach. Data were collected from 146 students as mentioned in the quantitative approach. Non-probability, convenience sampling technique was adopted for semi-structured interviews. Data was collected until reach the saturation point as described by Kumar (2014). Sample size for the interview was then determined as 10 respondents when it achieved the saturation point. Finally, data were analyzed using thematic analysis technique.

III. RESULTS AND DISCUSSION

A. Demographic Data

According to the sample, 24.5% were male while 75.5% were female.

B. Primary Language

The primary language of the sample was considered. According to that, the highest percentage of the respondents (93.9%) use Sinhalese as their primary language while 6.1% use Tamil as the primary language. None of the respondents use English as their primary Language (Figure 1).
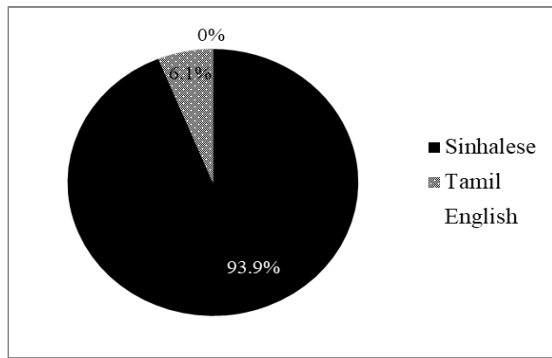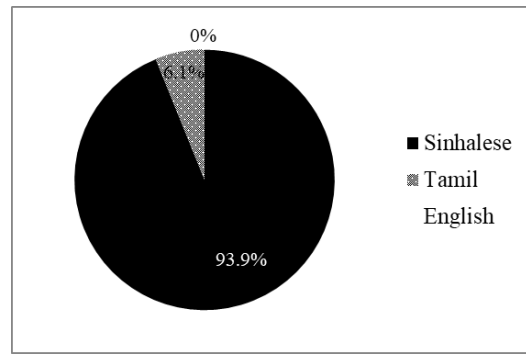
Fig. 1 Primary Language

Fig. 2 Medium of GCE A/L

C. Medium of General Certificate Examination (Advanced/Level) (GCE A/L)

The University Entrance in Sri Lanka is based on the results of the GCE A/L.The highest percentage of respondents (93.9%) has done their GCE A/L in Sinhalese medium while 06 respondents (6.1%) have done it in Tamil medium.However, none of the respondents (0%) have done their GCE A/L in English medium (figure 2).

D. Existing Self-Direct Learning Practices

Familiarity of the term 'self-direct learning'
The familiarity of the term 'self-direct learning' was assessed. The highest percentage, 77.6% was familiar with the term 'self-direct learning' whereas 9.2% do not familiar with the term 'self-direct learning'. However, 13.3% of the students do not have an idea of the term 'self-direct learning' (figure 3).
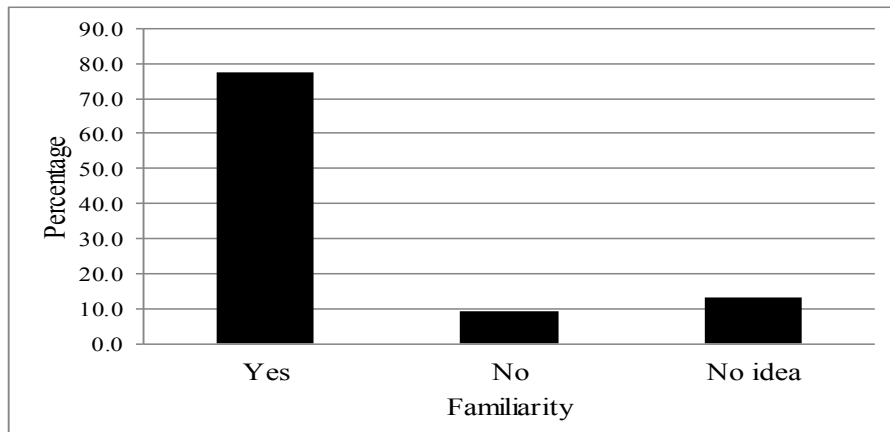

Fig. 3 Familiarity of term 'self-directed learning'

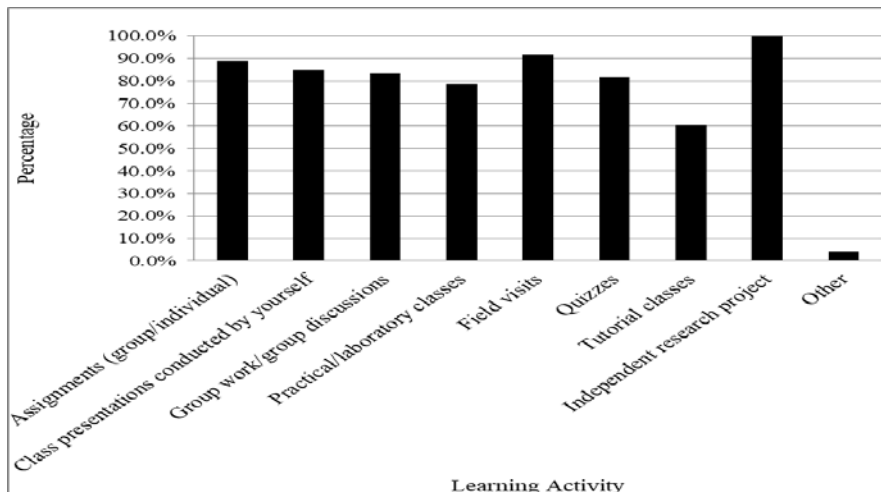*E. Self-Direct Learning Practices Adopted by Lecturers*

Fig. 4 Self-directed learning practices adopted by lecturers

It is obvious that, the highest percentage of respondents, 100% have engaged with independent research project while the least percentage of respondents, 60.2% hasengaged with tutorial classes. Other than that, it seems that most of the students have engaged in different self-directed learning activities; assignments, class presentations conducted by themselves, group work/group discussions, practical/laboratory classes, field visits, quizzes, tutorial classes. But four (4) respondents (4.1%) mentioned that they have engaged with other activities of e-learning, independent learning, food processing plant, in-plant training, viva and farmer training program (figure 4).

The semi-structured interviews were focused on one of the SDL activities; e-learning to get the in-depth information on the use and preference for e-learning of undergraduate students. All the respondents who participated for the semi-structured interview used the e-learning platform implemented by the faculty.

Usually e-learning platform provides the opportunity for an expanded learning environment. All the participants stated that e-learning platform was useful. One student emphasized the usefulness of videos uploaded as a learning resource. However, the undergraduate students mentioned that e-learning platform was helpful them to get learning resources uploaded by respective lecturers and to submit their assignments. As one student commented that the submission of assignments through e-learning system was easier than the submission of hard copy,

"…When submitting assignment, that was useful because it was easy to submit a soft copy via e-learning platform rather than written or as a hard copy"(Student J).

Meanwhile, semi-structured interview focused one of the other SDL activities, group work. Eight students (80%) had preferred group study while two students (20%) had preferred to study individually. Since group work allows collaborative learning, students are benefitted by group work. Students mentioned that group work allowed them to discuss subject matters and shared the knowledge among group members. As one student stated,

"I like to work as a group. I can discuss with my friends and share our knowledge with each other. If we have any doubts related to subject, I discuss with my friends and then it is easy to understand unclear subject matters. Usually we discussed past papers, questions etc. My friends may have another perspective than me and then we can share idea" (Student A)

Usually, students practicedhaving group discussions on subject matter and past examination papers before the examinations. Most of the students emphasized that they had discussions based on past examination papers and group discussions on subject matter helped them to answer the examination well. For an example,

"I like to work as a group then I can share our ideas with each other. It was effective. Usually, I had discussions with my friends for most of the subjects before exams. It was very useful when I missed some important points" (student B).

One student stated that that group work was an effective learning approach. Moreover, students mentioned that it was easy to understand unclear subject matters through a group work and avoid misconceptions of subject matters. Students also understood the importance of getting peers feedback, improvement of communication skills through group work and getting different perspectives from peers.

"I like to work as a group because it will help me to understand difficulties arising when I am studying. It enhances our learning. If I missed some important points, I could catch them while discussing and if I captured something wrong, I could correct it if I discuss with my friends"(Student D).

Usually, individual learning behavior may be different from one person to another. Therefore, some respondents preferred to study individually as one student stated that,

"I like to study individually because the way of studying is unique to an individual; it varies from one person to another. My way of studying may not match with my friends, so I like to study by myself. But I prefer to teach my colleagues then I can easily remember it"(Student G).

Although some students preferred to study individually, they had experienced the advantage of group study to clarify subject matters as,

"I prefer to study alone and want to understand by myself. But for the confirmation of the things, I studied and if I need any clarifications, I prefer to do group studies. But when I need to study in a rush I used to study as a group" (Student J).

F. Preferred Method of Study

Four methods were given in the questionnaire as 'I prefer to listen lectures only, I prefer if the lecture is incorporated with above activities, I prefer to study their own way with the guidance of the lecturer and any other to select one of most the preferred methods of learning.

The results revealed that 61.2% of the respondents preferred if the lecture was incorporated with self-direct learning activities mentioned in figure 4, 36.7% preferred to study their own way with the guidance of the lecturer, 2.0%mentioned that they preferred other methods which include 'through internet' and 'e-learning'. Nevertheless, none of the students (0.0%) prefer to listen lectures only (Figure 5).
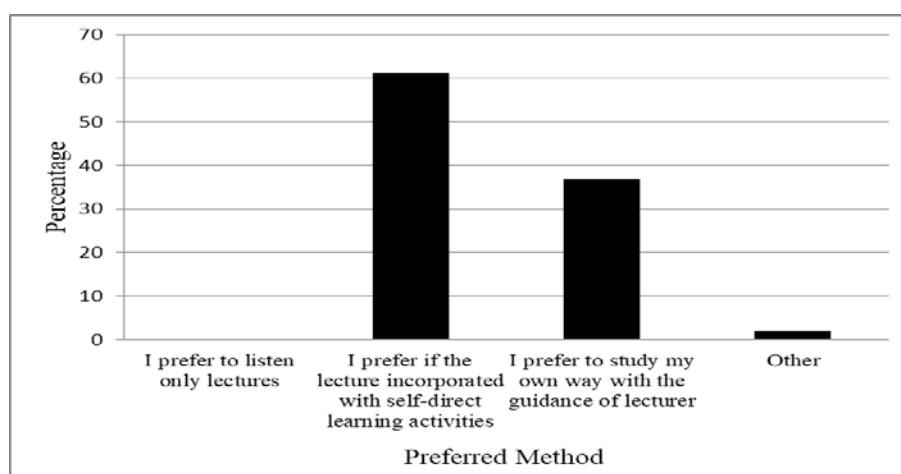
Fig. 5 Preferred method of learning

G. Problems of Undergraduates when they were Engaging with Self-Direct Learning Activities

The present study focused theproblems of undergraduates when they are engaging with SDL. Students were asked to reflect the extent to which they are agree or disagree (SA= strongly agree, A= agree, N= no idea, D= disagree and SD= strongly disagree) with the statements provided (Table I).

TABLE I PROBLEMS OF UNDERGRADUATES WHEN THEY ARE ENGAGING WITH SDL ACTIVITIES

S. No.	Statement	Responses (%)				
		SA	A	N	D	SD
1	The lecturers interested to test what I have memorized than what I have understood	16.3	63.3	11.2	6.1	3.1
2	The workload at the faculty is too heavy	32.7	40.8	7.1	16.3	3.1
3	I have enough time for self-study	4.1	31.6	13.3	38.8	12.2
4	I have a clear idea of the standard of the work expected from me when I engage with self-learning activities such as assignments	5.1	50.0	37.8	7.1	0.0
5	Lecturers gave me feedback/ comments on my learning activities (assignments, examinations etc.)	7.1	53.1	13.3	23.5	3.1
6	Lecturers guided me when I needed to clarify any doubts on my studies	12.2	60.2	15.3	11.2	1.0
7	I can plan my work effectively	21.4	65.3	10.2	3.1	0.0
8	I have language problems	2.0	31.6	3.1	49.0	14.3
9	I have communication problems (written/verbal)	4.1	27.6	13.3	42.9	12.2
10	Study material provided by lecturers are clear &understandable for me to explore the subject deeply using other learning resources	10.2	64.3	17.3	8.2	0.0

Considering the highest percentages in each statement, the highest percentage of students stated that the lecturers interested to test what they have memorized than what they had understood (79.6%), workload at the faculty was too heavy (73.5%). Further, 51.0% lack of enough time for self-study.

The highest percentages of students agreed that they had a clear idea of the standard of the work expected from them when they engaged with self-learning activities such as assignments (55.1%), that lecturers gave them feedback/ comments on their learning activities (assignments, examinations etc. 60.2%), lecturers guided them when they needed them to clarify any doubts on their studies (60.2%), that they can plan their work effectively (86.7%), 63.3% disagreed that they have language problems, 55.1% disagreed that they have communication problems, total 74.5% agreed that study materials provided by lecturers are clear and understandable to explore the subject deeply using other learning resources . However, it was noted that few students have issues with lack of clear idea of the standard of the work expected from them when they engage with self-learning activities, lecturer feedback on their work, guidance from lecturers, inability to plan their work, language problems, communication problems, issues with study materials provided by lecturers.

Based on the thematic analysis of the study, mainly the students were challenged by issues in course curriculum, teaching process, students' factors and lecturers' issues.

1. Course Unit System/Curriculum Issues

Students identified that the workloadwas heavy so as they did not have time to refer extra learning resources such as library resources.

"Library resources are useful, but with academic work load it is difficult to freely associate with books"(Student 28).

2. Issues of Teaching Process

It is observed that students preferred self-direct learning activities and they had stated the inadequate self-direct learning activities adopted by lecturers and inappropriate combination self-direct leaning activities. As one student commented,

"All these were practiced (refer the list of activities mentioned) but not correctly combined. Each lecturer had one or two above methods familiar with and did not go beyond that. One subject did not combine all these methods" (Student 28).

He had also identified that tight work schedule affects their learning approach and commented that students were unable to study their own way due to tight work schedule of lecturers. Students expected new up to date concepts or subject matters from the teaching process.

3. Student Issues

Language problem was one of the most affecting challenges for self-direct learning. One student stated the necessity of explaining lecture in mother language, whichwas an indirect expression of language problems.

"After lecture, 10 minutes have to use for explaining lecture in Sinhalese. It will help to improve in lives and prevent out of fail exam" (Student 39).

There were discussions existing in literature related to restrict for adapting or transforming to innovative modern learning environments. It was noted that some of the respondents participated for semi-structured interview do not prefer e-learning or less preference of e-learning. One student commented that,

"I used the e-learning system but not much. I used it if the lecturer made if compulsory but uploaded materials such as videos were highly useful…"(Student C).

4. Lecturer Issues

Lecturers also restrict transforming to modern learning environments. Most of the respondents stated that all the lecturers did not use the e-learning as a teaching tool. For example,

"…only some lecture notes were uploaded while some were not uploaded. It will be very helpful if they upload all the related learning resources"(Student C).

H. Correlations

Chi square test was adopted to identify the presence of relationship between variables meanwhile if there is a significant relationship exists between variables, Cramer's value was calculated to determine the strength of the relationship whether it is a very strong association or strong association or relatively strong association or moderate association or weak association or negligible association (Table II).

TABLE II CORRELATIONS

Relationship	Likelihood ratio			
	value	df	Asymptotic significance (2-sided)	Cramer's value
Familiarity of term 'self-direct learning' vs preferred way of learning	12.461	4	0.014	0.227
Having a clear idea of the standard of work expected from undergraduates when they engage with self-direct learning vs giving feedback/comments on their Learning activities by lecturers	27.57	12	0.006	0.323
Medium of GCE A/L vs language problems	2.384	4	0.666	
Preferred way of learning vs communication problems (written/verbal)	18.983	8	0.015	0.347
Language problems vs communication problems	97.008	16	0	0.633
Preferred way of learning vs guidance given by lecturers when students need to Clarify any doubts on their studies	11.738	8	0.163	

According to the table, it is obvious that moderate associations exist between, familiarity of term 'self-direct learning' and the preferred way of learning, having a clear idea of the standard of work expected from undergraduates when they engage with self-direct learning activities and giving feedback/comments on their learning activities by lecturers, preferred way of learning and communication problems. A strong association exists between language problems and communication problems. However, the relationship between medium of GCE A/L and language problems andthe relationship between preferred way of learning and guidance given by lecturers when students need to clarify any doubts on their studies are not significant.

IV. DISCUSSION

Self-direct learning is the key for lifelong learning. Individuals must be motivated with self-directional skills to be lifelong learners (Sze-yeng *et al.,* 2010: 1913). Therefore, higher educational institutions incorporated self-direct learning with the teaching process.

A. Familiarity of Self-Direct Learning

According to the study, most of the students are familiar with the term self-directed learning (77.6%). Since higher education institutes are challenged to produce lifelong learners, self-direct learning skills are promoted among their students to be lifelong learners. Therefore, most of the students are familiar with the term self-direct learning. Nevertheless, few students do not familiar with the term 'self-direct learning'. This may be due to their previous learning experiences of teacher centred learning, restrict to adapting self-direct learning exposure and the learning habit.

B. Self-Direct Learning Practices Implemented in Faculty

The undergraduate students had experienced with self-direct learning activities of assignments, class presentations conducted by students, group work or group discussions, practical/laboratory classes, field visits/field work, quizzes, tutorial classes, independent research project, e-learning, independent learning, food processing plant, in-plant training/industrial training, viva, and farmer training program. Not all the students experienced all the above activities (except independent research project). However, all the students had experienced the independent research project since it is being a compulsory requirement for the completion of their undergraduate degree programme. Thus, it implies that the faculty has incorporated self-direct learning activities with the teaching process. Similar learning activities to improve self-direct learning skills have been identified by Boud and Higgs (2004: 2) and Warburton and Volet (2012: 9-20). Boud and Higgs (2004: 2) discuss that self-direct learning may be achieved through project work, laboratory activities, learning contracts and other learning activities and open-ended assignments. Warburton and Volet (2012: 19) identify that quiz group assignments also help students to develop self-directed learning skills.

Semi structured interviews further elaborated the e-learning experience of students. All the participants identified e-learning as a useful learning tool and experienced the e-learning platform implemented in the faculty. The faculty is using MOODLE for developing e-learning system. Amandu *et al.,* (2013: 681-682) discuss that MOODLE e-learning platform is a powerful, innovative, user-friendly teaching and learning tool, which could be used to promote self-directed learning. It enhances SDL and provides space for students to experience SDL activities.

It promotes collaboration of peers, sharing knowledge and creates learning communities, encourages better learning, increases learning interests, better performance, motivation for educational experience, lifelong learning skills, participate beyond classroom hours, cost effective learning tool and increased access to course. MOODLE e-learning platform is fostering pre-class preparation, post-class participation, active learning, and motivation of students. It was observed that students in the present study used the e-learning platform for getting learning resources and submitting assignments. But it could be used for expanding learning environment of undergraduate students such as group discussions/forums, quizzes, collaborative learning. Furthermore, Song and Hill (2007: 35) describe that as online learning allows more freedom, learners need to monitor their learning activities by themselves, seeking assistance when needed, seeking resources and improve the learning process.

C. Preferred Method of Study

According to the present study, the highest percentage of students prefers to engage with the self-direct learning activities blended with the lecture. None of the students prefer to listen lectures only. This implies the motivation of undergraduates towards self-direct learning. Students transform beyond their traditional learning approach which could be due to demand of self-direct learning practices in higher education system. Moreover, some students prefer to study their own way with guidance of lecturers. They may be highly self-motivated and self-directed in their learning approach. So, as they prefer to study their own way. Some students also prefer other methods such as 'through internet' and 'e-learning' due to innovative learning environments associated with the technological development.

However, the present study identifies that the learning preference correlates with factors such as familiarity of the SDL and communication problems. The study revealed a moderately strong significant relationship (p=0.014, Cramer's v= 0.227) between familiarity of term 'self-direct learning' and the preferred way of learning. Francis and Flanigan (2012: 3) discuss those psychological

variablessuch as interest, personality characteristics of emotional stability, independence, super ego strength, sensitivity, and conscientiousness positively correlated with SDL.

Meanwhile, moderately strong significant relationships exist between preferred way of learning and communication problems (p= 0.015, Cramer's v= 0.347). Due to communication problems students may be challenged when they are seeking assistance, finding learning resources and interacting with peers or teachers. Therefore, communication skills play a vital role for students' self-directness. So as undergraduate students' learning preference is affected by communication problems when they practice self-direct learning.

However, the relationship between preferred way of learning and guidance given by lecturers when students needed to clarify any doubts related to their studies is not statically significant (p= 0.163). Contrasting to the present study, Francis and Flanigan (2012: 7-13) identify the relationship between levels of SDL and learning preferences associated with high levels of instructor control and it is not a direct relationship.

D. Problems of Undergraduates when they are Engaging with Self-Direct Learning Practices

Undergraduate students are challenged by different factors when they engage with self-direct learning activities. The problems of undergraduates when they are engaging with self-directed learning practices in Faculty are mainly related to course curriculum, teaching process, students' factors, and lecturers' issues. Douglass and Morris (2014: 13) also identify similar issues under three themes of facilitators and barriers for self-directed learning as student controlled, faculty-controlled and administration-controlled facilitators and barriers.

Curriculum issues include tight work schedule/heavy workload, lack of time for self-study, lack of time for library use. Similarly, Boud and Higgs (2004: 10-17) also identify issues related to curriculum, teaching and assessments. Five issues related to implementation of SDL were mentioned as authority of SDL, finding an appropriate curriculum framework, establishing a suitable institutional context, ensuring effective content goals, and developing appropriate student assessment.

Douglass and Morris (2014: 18-19) identify faculty-controlled facilitators and barriers as class structure, curriculum design (job shadowing opportunities, independent projects, internship and clinical opportunities) and professorial attitudes and traits (faculty advising and support, faculty use of real world experiences, professorial enthusiasm) and administration-controlled facilitators and barriers as infrastructures and resources (scheduling of courses, class size, faculty workload, technology access), and incentives for students (rewards, recognition).

As issues related to teaching process, students commented that self-direct learning activities incorporated with a particular lecture is less and subject content is not updated. Like the findings of the present study, Guglielmino (2013: 10) discusses that most of the classes use of old lecture notes.

Further, all the lecturers do not use the e-learning as a teaching tool. This may be due to restrict for changing from traditional teaching practices. Stewart (2007: 62) also identified the similar internal barriers of restriction of academic staff for adapting new learning environments and the academics who are accepting this do not know how to adapt it.

It was noted that few students were challenged by language problems and communication problems. Since most of the students have done their GCE A/L examination in Sinhalese medium or Tamil medium, they may struggle with language problems as the degree programme offered by the faculty is instructed in English medium. Nevertheless, the present study identifies that the language problem is independent from medium of GCE A/L. Bandara (2015: 16) also discusses the similar issues of language difficulties as a major barrier for SDL. The language problem strongly correlates with communication problems (written/verbal). Therefore, the communication problems may be due to the language problems of students. As discussed above, communication problems have an impact on students' preferred way of learning.

Some students mentioned the inability to plan their work effectively. This may be due to lack of proper guidance, lack of self-management skills and lack of self-confidence. Similarly, Kusumsiri (2010: 4) identifies problems of lack of knowledge to prioritize their work, difficulties in identifying learning goals.

Further, the present study identified less preference towards innovative learning environments such as e-learning. Although students had identified e-learning as a useful tool for teaching and learning, their preference and usage of e-learning platform is limited. This is due to restrict to move beyond the traditional classroom setting. It is one of the most common issues. Similarly, Guglielmino (2013: 10) discusses that one of the problems to develop self-direct learners is restrict adaptation of students since they have been prepared as dependent learners. This may be due to external barriers such as teacher centered learning in secondary schools and heavy workload for students as discussed by Stewart (2007: 62). A different perspective to the present study has discussed by Song and Hill (2007: 32, 36). Online learning could be asynchronous. Instructors may not be able to respond each question due to heavy workload and limited time. Online learners are challenged by planning, monitoring, and evaluating and learners could be supported by instructor feedback, peer collaboration and communication.

Contrasting to the present study, Douglass, and Morris (2014: 16-18) discuss that student-controlled facilitators and barriers for self-directed learning are being proactive in class, being proactive with other students, being proactive outside of class, having good study habits and metacognitive factors. Bandara (2015) further discusses some contrasting issues to present study, examination pressure and insufficient time allocation for the subject as major barriers for SDL.

Most of the students agreed that lecturers interested to test what they have memorized than what they have understood. Similar issue is discussed by Guglielmino (2013: 10) that most of the classes are based on lectures, exams, and demand for testing coverage and memorization rather than the understanding.

Very few students were challenged by lack of a clear idea of the work expected from them when they engage with self-direct learning activities. This may be due to lack of or insufficient feedback/comments from lecturers. The present study identifies a moderate association between having clear idea of the work expected from them when they engage with self-direct learning activities and feedback/comments on their learning activities by lecturers (p=0.006).

When students get feedback/comments from lecturers on their learning activities, students have a clear idea of the work expected from them. Then they may get the opportunity to understand their mistakes and they may get a clear direction towards learning goals. This may help students to understand the standard of work expected from them. Therefore, lecture feedback will direct students and improve their performance. Meanwhile, lack of feedback/comments on their learning activities may affect the students learning approach. Similar to the findings of the present study, Du (2013) discusses that students identified teacher as knowledge transmitter, and they rely on teacher feedback.

Further, students were challenged by lack of guidance from staff when they needed to clarify any doubts on their studies. This may be due to busy work schedule of lecturers and large number of students in a class. Kusumsiri (2010) discusses that most of the students need the guidance of tutors to manage above problems. Unclear study materials which are not understandable to explore subject deeply using other learning resources is another issue of undergraduates when they engage with SDL.

V. CONCLUSION

According to the present study, most of the students were familiar with the term self-directed learning. They had experienced with several self-direct learning activities; assignments, class presentations conducted by students, group work or group discussions, practical/laboratory classes, field visits/field work, quizzes, tutorial classes,

independent research project, e-learning, independent learning, food processing plant, in-plant training/industrial training, viva, and farmer training program. Students express different learning preferences. Most of the students prefer to engage with the self-direct learning activities blended with the lecture. Some students prefer to study their own way with guidance of lecturers whereas none of the students prefer to listen lectures only. Some students also prefer other methods such as through internet and e-learning. However, students struggle with some issues when they engage with SDL which are mainly related to course curriculum, teaching process, students' factors, and lecturers' issues.

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