Reflection Completes the Learning Process:
A Qualitative Study at Higher Education

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Abstract

Reflective writing as a key component is one of the foundational object in Kolb's experiential learning process; concrete experience, reflective observation, abstract conceptualization, and active experimentation. The current qualitative study using single-case study design, explored the role of reflective writing in making learning effective and long-lasting at university classroom. For this purpose, total sixty-three students enrolled in the course Application of Computer in Measurement, participated voluntarily in the study. The textual data consisted of written-assignments and classroom-tasks were analysed through document-review as data source. The researchers carefully integrated all the texts into keen observation and analysis and extracted meanings from the reflective writings of the participants in order to sustain reflexivity to ensure trustworthiness as a key component of qualitative studies. Each and every participant's document was passed by in-depth and keen analysis employed through coding, categorization and themes generation. The findings showed that students need to develop better understanding in sentence-structuring, application of ideas, how to make meanings from interpretation of texts in terms of improvement. The study also concludes that there was lacking in terms of written-feedback from the teachers however, oral-feedback was utilized at maximum level. The study contributes to the knowledge towards the proper reflective writing practices at higher education level. The implications showed that a single student's ability may be engaged in successful learning course of action and outcomes through proper guidance provided by the teachers to them regarding reflective-writing.

Keywords: Experiential learning, reflection, reflective writing, reflective practice, university classroom, higher education

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Introduction

Reflection is an active device of cognitive development at higher education level because it becomes fortunate goal of teaching to transfer such knowledge to the students that may help them in fostering their abilities or skills towards reflection practices in the field of education (Moussa-Inaty, 2015). Reflective writing is considered as a complicated and profound process at higher education level. The reflective writing process not only enhanced students' engagement for their learning improvement but also has the importance of trigger in the promotion of successful learning course of action (Maclellan, 2004; Davis, 2006; Tsang, 2011; Mair, 2012). In the words of Chickering and Reisser, 1993, teaching quality may be better visualized when students are reflectively walk through the learning track in order to gain creativity.

There is a direct link of reflection with creative thinking skills as it was evidenced through the experimental study conducted by Dvergsten and Haugen (2015) that cooperation of experiential learning experiences with reflective writing assignments is the best source of creating critical thinking skills. Sheih and Chang (2014) also postured that a combination of problem-solving and creative skills is effectively nourished through experiential learning activities. Teaching may be effective in a way when it promotes cognitive and social aptitude, individuality, high aims and loyalty; on the other hand, teaching will be turn into ineffective process when it fails to develop these skills in individuals. In order to develop such effective qualities in individuals the structure of university classrooms may be exchanged with the traditional teacher-centered environment. Trigwell, Prosser and Waterhouse (1999) also stated that such teacher-centered environment is critically poor due to lacking in the development of creative-skills in the university students. When a value of learner is merely as attendee in teaching-learning process, higher creative and cognitive skills may not be developed properly. Inspite of this, a classroom where teacher gives a chance to pupils to be the part of entire learning process and involves them in the decisions of what will be learned to the evaluation of what was learned- from the starting till end, this would be a real picture of university classrooms (Knowles, Holton, & Swanson, 2005).

Chickering and Reisser (1993) placed their views again that learning should not be considered as a cheerer game where just delivering lectures are sufficient for the accomplishment of teaching-learning process. Research exhibits that university students are lacked having critical thinking skills. If teachers do not teach properly for the sake of development of critical and creative thinking skills in students, it approved their negligence (Cano & Martinez, 1991; Whittington, 1995). Teachers may influence the way of learning by which critical thinking skills can be promoted in university students simply by focusing on their individuality, and subject-matter (Stedman, 2009; Stedman & Andenoro, 2007).

Humphrey (2009) defined reflection as "the activity which occurred in our own minds when we stay back from the first-order process in everyday life and practice raw experiences from the distance, inviting second-order processes to come into play" (p.381). according to Moon (1999 (b), 2004, reflection is a kind of mental procedures with a unique aim and/ or expected output which is applied to comparatively complicated or even scattered ideas. Reflection as key component permits learners to make sense between theory and practice and also with the activities conducted in the classroom to be applied into their routine life. Their ideas, when become concrete, strengthen and enrich learning process (Bringle & Hatcher, 1999). Another main advantage is that reflection provides students with insight to explore those concepts which they actually think; get engaged mentally towards the readiness to act. When students enable to shape their ideas into concrete form through reflecting and make themselves engaged with the activities and readiness to improve learning in a better way, this become reflective learning. Boyd and Fales (1983) described reflective learning as the process of inner investigation and enlighten the issue of interest, produced by an experience, which make and justifies itself meaning and changed it into new conceptual viewpoint. To get experience from learning, reflection is compulsory because it enables the person to get maximum level of proficiency in behaviour due to repeating one experience for several times or try new one with a different concepts and also change cognitively.

Dewey (1910) maintained that reflection, in actual meanings, helps the individual who start their journey from unbelief to clarity and lucidity. Bringle and Hatcher (1990) also defined the role of reflection in terms of making bridge between practice and theory in the context of learning. They highlighted that the students' learning becomes deep and strengthened due to reflection. The students who in search for a new knowledge and utilize an effective approach to learn through reflection are better than those who merely get knowledge for passing and clearing the exam for some specific purpose (Marton & Saljo, 1976).

According to Moon (1999); Fund, Court and Kramarski (2002), reflection can be take place in several ways i.e. journalising as a sign of individual' narrative perspectives, gradually creates and increase knowledge with reference to writing, and a research paper generally take worth as a means of reflection; research project enables the students to exhibit ideas and concepts and transfer them through experiential learning are also the essential part of reflection; term-paper allows students to put their thoughts into words, screening the concepts essential to them and transfer their ideas into better way of expressions (Anson & Beach, 1990; Hiemstra, 200; Moon, 1999b).

The two main components are briefed by the theoretical framework of the study; first was experiential learning which is defined by Luckmann (1996) as a process through which a student creates knowledge, skill, and give them worth from experiencing directly. Dewey (1938) postured that the quality of experience defines the quality of thing/or activity which is take place. In fact, the real essence of learning hidden in the consequences of experiences occurred in a natural situation, their assessment and reflection of these experiences. The formation of new ideas and concepts take place in the result of the reflection of the experiences based upon past occurrence (Arnold, Warner, & Osborne, 2006).

Kolb (1984), as a main contributor of experiential learning theory, referred learning to a process by which knowledge is build up through the mobilization of experiences and transferring them into meaningful combination which reveals into new knowledge. Kolb presented his theory in the shape of four–stage learning cycle i.e. concrete experiences, reflective observation, abstract conceptualization and active experimentation in which the student grasps experiences by the utilization of two stages concrete experiences and abstract conceptualization, and then transform those experiences by the utilization of reflective observation and active experimentation, in this way the entire experiential learning cycling process runs effectively (Kolb, Boyatzis, & Mainemelis, 2000).
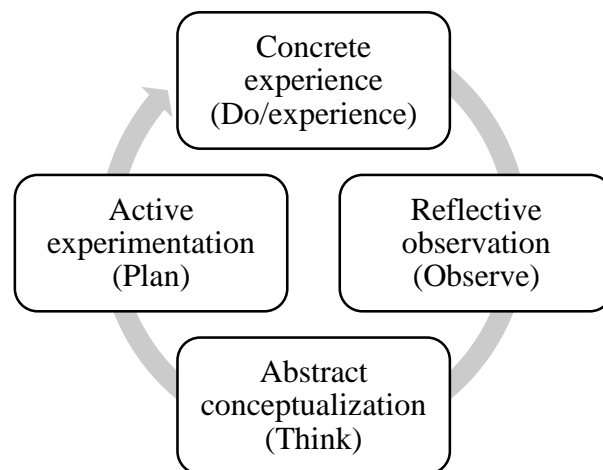
Figure1. *Experiential Learning Cycle (Source: Kolb, 1984)*

The first stage of ELT cycle (doing and planning) is passed through the student' involvment in such activities performed inside or outside the classroom which give them hands-on experiences, where as the second stage (observing) enables them to remind those learning activities , review them and then reflect on them by using new ideas and concpets; third stage of ELT (reviewing) make them able disseminate knowledge and theory from the previous experiences based on observation and reflection, and the last stage of cycle,active experimentation (planning and doing) allows students to interpret the reviewing ideas and make meaning from them and transform into new phase of knowledge (Lam & Chan, 2013).

Reflection, as the second major component of the theoratical framework of the study represented as a foundation. In the words of Dewey (1910) reflection is considered as active, consistent and conscientious perspective of any belief or knowledge and make conclusions in the light of supporting surface. The configuration of reflective learning is developed ultimately by the creation of creativity and high-order thinking skills which is demanded at higher education level mostly. The teachers get effective feedback through reflection and measure their success in terms of the provision of such high-order thinking skills into students that will create reflective learning in them. In order to keep on this main feature, the teachers need to work on such activities to be integrated in the classrooms that incite reflective qualities in the students and run the reflective process in any form i.e. term-papers, journal-writing, assignments and so on. The main objective of the study was to explore the role of experiential learning with a focus on reflective writing at university level. This study examined the role of experiential learning with a focus on reflective writing through students' writing materials including assignments, activities and tasks conducted in the classroom. Sixty four students enrolled in the course Application of Computer in Research, were participated in the study. The focusing research question was investigated by the researcher: How do the students' reflective writing define the role of experiential learning for developing professional skills among them?

Reflective Writing and Higher Education

McCarthy (2011) described well about the importance of reflective writing at higher education level, in his words; experiential learning have been sought to embedded within curriculum in several professional programs evidented reflective concept in vocational courses for many decades (Moon, 2004, 2005; Peel, 2009; Webstar, 2002). These stances reflect that reflective practices need to be concentrated within beginning for such programs (Brockbank & McGill, 2007).

Moon (1999), however, indicated that sometimes reflection has been overlooked at higher education due to the focus on provision of core skills i.e. teaching practice, assignments and other co-curricular activities obligatry for professional training. The inclusion of reflective and experiential learning may beneficial for the students of higher education level in increasing their academic and professional skills. Additionaly, personal growth and development is also applied to higher education, espacialy in professional development courses, since its been essential to promote reflective practices at the early moment within higher education, and being considered important to introduce such reflective habits (Edwards, 2005).

Research Methodology

Philosophical background of the study is based upon interpretive or constructivism paradigm as expressed by Biel, Eek, Gärling and Gustafsson (2008) that interpretive or constructivist primarily tend to narrate and understand socially constructed realities. The explorative method braced up this study due to the stance that reality is created in the mind of the individual, rather than an external singular entity (Ponterotto, 2005).

Under the interpretive paradigm, qualitative approach was utilized and within this approach, a single case-study method was employed. Students' academic documents i.e. assignments, tasks and projects based on different research techniques were reviewed as the main source of data collection.
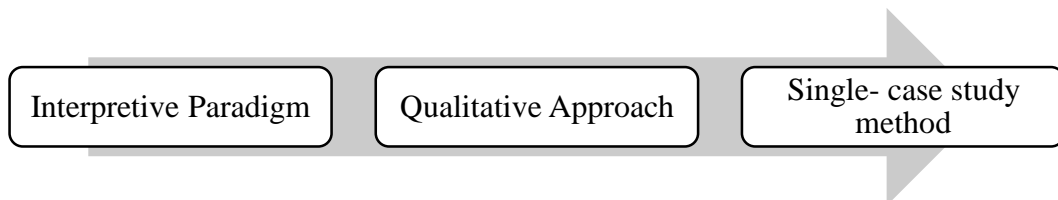
Interpretive Paradigm	Qualitative Approach	Single- case study method

Figure 2. Research design of the Study (Source: The Researcher)

In order to ensure validity of the data collection source, the experts' opinion was taken into account and changes are made accordingly, as far as reliability is concerned, reflexivity is ensured for the purpose of trustworthiness. By employing purposive sampling technique, sixty-four students (32 morning and 32 Evening class) who have experienced one and half month practice teaching, enrolled in the course *Application of Computer in Research* at public university of the District Lahore, given the researcher a prolong commitment with the participants. In order to minimize biasness, the researcher took support of the services of co-researcher related to the same area of specialization.

The analysis of documents based on intensive and careful reviews in order to gain in-sight for the implementation of the results. Mostly a new chapter and discussion related to a theory, approach or model is included in the beginning of each class which was normally followed by that activity which expressed the theory or model. The guidance from the teachers in terms of utilization of different techniques, expressed examples, presentation of samples or models related to theories, also provided to get through the activities. Sometimes these activities held in the group-form in order to visualize individual responsibilities with group member and to his own work.

For this purpose, teachers used to divide students into four groups in which one member has to lead one group. This activity usually compels all the students to work and reflect by their own viewpoints using their own minds. By the end of task days, the reflected responses of students would be presented through their writing styles in which they illustrated their own mind ideas and explore new concepts related to their understanding. Webster and Hoover (2006) also maintained their standpoints in the support of reflection that it possess the quality to transform the experiences of the pupils in terms of their understanding and also motivate the teachers to increase students' understanding for the exploration of new concepts. The documents, which reflected the researcher' report, were semi-structured in nature (Merriam, 1998). The students followed the guidelines and also given the opportunity to freely express their concepts and ideas through their writings.
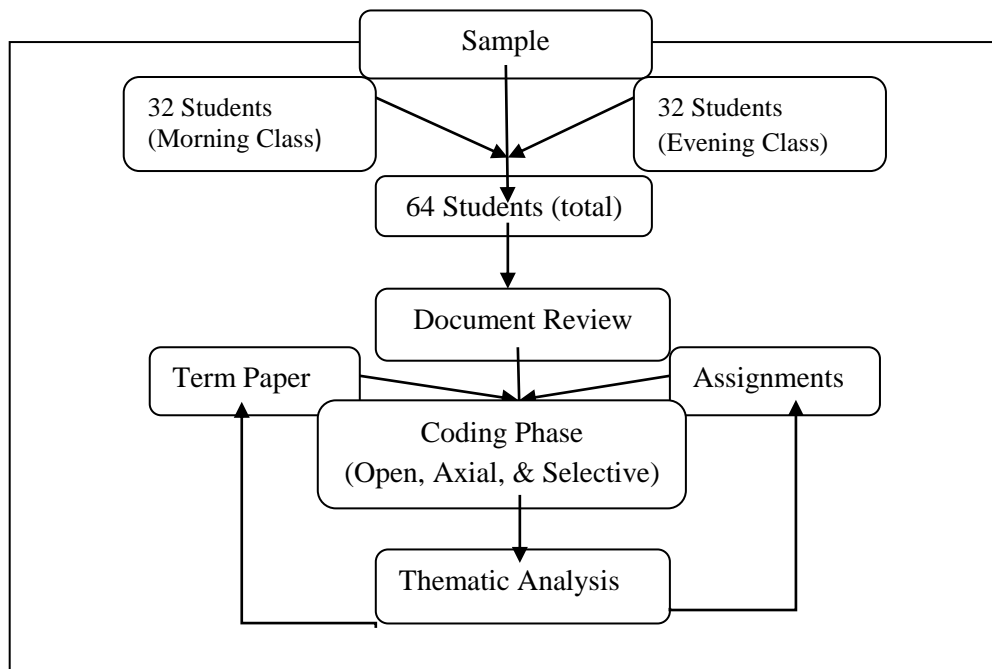
Findings

The current study's findings focus the main research question; how do the students' reflective writing define the role of experiential learning for developing professional skills among them? The thick and deep analysis through the phases of coding visualized the following themes: (a) integration of concepts, (b) new knowledge, (c) analyze and interpret concepts, (d) review and make improvements, and (e) receive feedback.
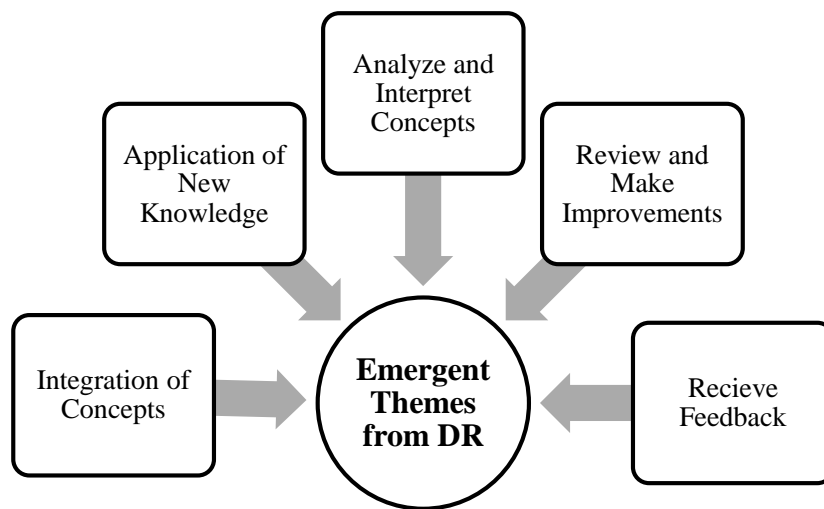

Figure 4. *Emergent themes from document analysis (Source: Researcher)*

Integration of concepts or ideas enunciated through taking an important step in the shape of reflection by the students. Reflection enabled the students not only analysing their writings but also assembling ideas after combining them into cohesive meanings and presented into concrete form. Reflection is the strong source which represents how the students learn and how they utilize the learn experiences while explaining their own ideas and concepts. The textual data exhibit that majority of students (Morning-class) used "definitions of the different terms" into explaining form so that extracting the actual meaning of the terms by clarifying the concepts into their own vocabulary which shows that students might focused on integration of ideas while On the other hand, some of the students (Evening-class) less focused on explaining the terms into their own words.

While observing the writings of the students, some of the students (Morning-class) could only narrate or summarize the actual text without explaining the concepts. After the keen analysis of the texts, the application of new ideas in the majority of the students' writings was obvious unclear. The lacking in academic vocabulary was also depicted through some participants' writings. Conceptual understanding is one of the main features of Kolb's experiential learning theory, which was also neglected in mostly

participants' writings (Evening-class) which revealed participants' less attention to readings, however, five out of total participants' texts (evening class) showed creativity in their writings skills to some extent.

The teacher ensured individual responsibility of the students to take their own steps in doing classroom tasks; however some of them seemed to copy each other' work. As far as reflective observation (Kolb's EL theory cycle) is concerned, male participants (Morning-class) showed attention to review their task in order to make new amendments and apply new ideas rather than female participants. Most of the participants (evening class) have tried to explore new ways of writing- styles which indicated their efforts to learn through the activities depend upon experiential learning as it was also mentioned in Kolb' theory that reviewing the tasks in terms of making meanings from them and make positive corrections are also main factor of generating new ideas. The dispersed state of ideas, incoherent expressions showed that some of the male participants (evening-class) have imbalanced-sense of understanding concepts. Whereas some of the female participants (morning-class) reflected concepts-understanding very well. The tasks were reviewed keenly which showed major improvement in the participants' work. The researcher incorporated third and fourth elements of experiential model, the former, abstract conceptualization, where ideas may be regenerated in order to review the tasks and improve it in the light of suggestions provided by the teachers and the later, active experimentation means to making plans in doing the activity or task again after reviewing and improving the concepts. The researcher keenly observed the texts and found lacking in academic writing abilities i.e., grammatical, phrases, and sentence making. Most of the participants adopted casual writing style instead formal. Majority of the texts depicted participants' inability in reviewing their work and improving it. Nevertheless, twelve out of thirty two participants (morning-class) not only reviewed their tasks and got positive feedback from the teacher after improving it. Repetition of concepts was also revealed by reviewing some of the participants' data (evening-class).

Teachers marked the participants' assignments rather they spent less time over giving them an adequate written-feedback which might lead them to improvement and make their learning effective. The matter of fact was that majority of the assignments were overlooked by the teachers where students' conceptual understanding was main factor. Feedback is a motivational drive for the students to get the appreciation on best-work done by them. The students' documents revealed a bit lacking in this process though teachers have been taking their students to the track of effective learning through demonstration and lectures in the class. The researcher, however, found that most of the textual data were overlooked by the relevant teachers. In most of the students' writings (Morning-class), it was observed that they made illogical sentences where the actual meaning of the concepts was lost. Whereas some of the students' writings (evening-class) explored that they narrated into simple language except academic. Students' writings

(morning-class) also depicted that they paid less attention towards sentences making sense, and towards correct form of tenses which reflect their negligence. On the other hand, the teachers also highlighted such type of errors; like punctuation, typing-errs, paragraphs settings and other formatting mistakes.

Repetition of ideas or concepts was also major default observed in the students' writings which may reflected their inability of having awareness regarding updated vocabulary. The major concepts highlighted by the students (Morning-class) were on repeatedly covering same style of writings. However, the students (Evening-class) made efforts in describing new or something not already narrated.

Discussion

Keeping in mind, the essential importance of reflective writing in experiential process as illustrated by the various authors (Davis, 2006; Maclellan, 2004; Mair 2010; Moussa-Inaty, 2015; Tsang, 2011) the participants' documents reflected improvement in their writing-styles, concepts' understanding, and ideas generations, reviewing tasks in order to overcome mistakes, vocabulary-practice, and learning new terms in order to sustain new knowledge. Participants' writings also showed a bit amount of creative skills which is evidenced in the researches that creative thinking skills are reflected through the incorporations of experiential learning theory (Dvergsten & Haugen, 2015; Sheih & Chang, 2014).

The development of experiential learning environment can only be possible when the class-room structure would be based on child-centred learning; it was observed by the researcher that class- structure was not fully based on such environment as it was also evidenced in the literature (Trigwell, Prosser & Waterhouse, 1999). Another important stance of Chickering and Reisser (1993) also illustrated that only delivering lectures in the classroom may not helpful in fostering experiential learning environment in the university classrooms. Teachers may play their role effectively in the development of critical thinking skills which was often neglected by the observations and keen review of the textual data of the participants (Stedman, 2009; Stedman and Andenoro, 2007).

The Participants' textual writings illustrated dispersed condition of ideas i.e. incoherence, repetition of concepts, as it was reported by Moon (1999b; 2004) that reflection can be executed on the scattered ideas, even complicated ones. While Bringle and Hatcher (1999) supported the researcher's stance if ideas come into concrete shape (as Kolb's ELT; concrete experience), they can strengthen the learning process. Most of the textual data showed participants' lacking of conceptual understanding which turns into repletion of mistakes; however, it was evidenced in the literature that reflection, actually enables the individuals to start their journey from unbelief to clarity and precision of concepts (Dewey, 1910).

Kolb's experiential learning theory illustrated that if any activity or task may be handled through utilizing four stages cycling process; concrete-experience, reflective-observation, abstract-conceptualization and active-experimentation than the tasks or activities would go towards successful generation of new knowledge. The four stages of ELT supported the researcher's stance pointed-up through the students' reflective-writings. Bonwell and Eison (1991) stated that students need to add more actions than merely listen i.e. read, write, discuss and get involved in problem solving activities while experiential learning cycle (Kolb, 1984) motivated students' retention of learning as was overlooked in participants' writings and the quality of their reflection in the assignments.

In the writing of assignments, activities and tasks completion, students may learn to attempt and do tasks effectively by reviewing literatures and might interpret to make meanings out of them at maximum level as Brock and Cameron (1999) explained that if students are instructed through the help of experiential learning model, it will enable them to create problem-solving skills and creativity. Feedback influences the quality and development of reflective writing process in a great way that without it reflection meanings become no-worth. Valli (1997) maintained that there is a need to encourage reflection and it also requires high expertise. A platform is provided by the reflection to the students' exposure of new ideas and visions where they can practice on the concepts dealing with new ideas. When students readily involved in the experiential learning activities, this would increase their retention of concepts more than tests. It may be concluded that some of the part of the course may base on those assignments which promote reflective writing in order to supplement students' academic and professional learning at high education level. It may also be revealed through the previous findings and reviewing literature that engagement of experiential learning methods in university classrooms may prove transformative learning which is defined by Mezirow (1999), a process which gives meaning to an experience by the new or repeated interpretations and provide guidance to consequent understanding, positive reception and implementation.

Learners' experiences may be transformed through the critical reflection of those experiences. In the students' reflective journal and papers, they thought about previous experiences, examining them in a new light. They revised their interpretations of the concepts, and ultimately improve or transform their way of thinking.

Conclusion

All the textual data, after keen observation and analysis, illustrated meanings to the researcher which is manually passed through the process of coding and categories, the themes emerged from the coded data. In order to extract the meanings from the texts, the researcher keenly and repeatedly went through the data. The study concludes that participants' data reflected their lacking in conceptual understandings which may resolve

through the proper guidance and intensive opportunities to get into reading Literatures. Analysis of documents demonstrates the real picture that participants have lacking in generating ideas and shape them into concrete exposure. The participants mostly adopted the typical way of doing tasks. The researcher found most of the documents were only narrations in spite of forming new ideas which is salient feature of experiential. The results show participants' lacking over the command of utilizing vocabulary into strong arguments which may also turns into week grip of reflective writing. The study discovers that insufficient chances of getting proper feedback from the teachers may harmful for the nourishment of improvement in the students at higher education level.

Recommendations

1. In order to develop critical thinking and problem-solving skills, it is recommended to incorporate reflective writing practices with experiential learning activities for the effective teaching and learning process at higher education level.

2. The university teachers may also develop positive attitude towards incorporating experiential learning activities during classroom sessions for the betterment and upholding creative skills for students.

3. It is strongly recommended in order to illuminate the light of creating new knowledge, reflective-writing practices may foster the awareness to overcome the reading as well as writing deficiencies which may become the hurdle in the development of creativity and problem-solving skills at higher education level.

4. Reflective practices may give an incentive for action which may beneficial for the students in getting knowledge about how the new understanding may affect their learning better. Especially, these mental attitudes may answer to some questions, why this is important to me? This viewpoint may give free will to the students in perceiving good ideas and making meaning from them.

5. In order to ensure the connection of new ideas and visions with the previous experiences, the teachers, at higher education level, may consider the reflective practices in their daily routines through giving such assignments and tasks so that students' learning may transform towards active process. Due to the involvement of reflective practices, the university teachers may encourage their students to uphold an active innovation to learning.

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