Factors Influencing Undergraduate Students' Research Identity: Case of University of Technology and Applied Science

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Abstract: *This paper is an attempt to discuss the growing demand for a professional academic writing which is shaping the need for a clear understanding of research identity concept. The main objectives for this paper is to outline the factors associated with students' research identity, to examine the influence of TR, L & CoP on undergraduate students' research identity and finally to recommend strategies to develop students' research identity. A survey was carried out using structured questionnaire distributed to a sample of 90 students in order to get a prompt response on students' concepts on research identity. The study revealed that there is a significance association between the independent variables i.e. Communities of Practice Transformational Learning Liminality and the dependent variable students' research identity. Further multiple regression equation was calculated the confidence interval associated with the regression analysis doesn't contain (0) which means the null hypothesis to be rejected and thus accept the alternative hypothesis i.e. there is a statistically significant association between (IVs &DV at B=, p≤0.05). This recommended that students should have practical sessions in relation to the process of identifying problem statement and situation analysis, Enhancing the critical reading strategies, taking notes, building and defending arguments, improving the teaching and course delivery techniques by applying innovative techniques in relation to project management process as it will build students capabilities in planning, executing and team spirt. Further the research will benefit students' graduate attributes.*

Keywords: Research identity, Communities of Practice, Transformational Learning, Liminality

1. Introduction

Academic writing is a process of becoming self-sufficient in one's abilities to evaluate, argue, and place oneself in relation to others. Writing entails first clarifying research thinking and developing ideas, and then "integrating" diverse aspects of their work when completing the proposal, thesis, essay final draft (1) . Thus, academic writing entails the synthesis of a writer's sense of self and confidence with a focus on putting one's own stamp on the text (2) thereby positioning the self as a legitimate voice with something to say (3) To put it another way, writing is the physical manifestation of a person's study ideas and identity as a scholar. (4)

Problem statement
Research methodology is a common course taught in third for undergraduate students in business studies department at the University of Technology and Applied Sciences, Sultanate of Oman, the students need to learn on how to situate themselves as scholars and establish academic scholarly identity – a sense of independence as a researcher, located within a discipline and contributing to the body of literature – by writing, researching, receiving feedback, and revising their research proposals. This research study is attempt to investigate on how the undergraduate students research identity is composed , and what are the most important factors that are influencing the quality of students proposal.

Research objectives
1) To outline the factor associated with students' research identity

2) To examine the influence of CoP , TL and liminality on students' research identity
3) To suggest strategies on how to develop students' research identity for undergraduate students.

2. Literature Review

Communities of Practice are utilized as a tool in a variety of contexts in higher education, including faculty development and graduate and undergraduate instruction. Learning is socially located and socially constructed in a CoP (5) A CoP can be a useful tool in education since it provides a practice-based environment in which learning can take place, transforming an individual's knowledge from accepted to changed (6), CoP has been demonstrated to foster elements of mutual involvement, collaborative endeavor, and shared repertory in participants even in an online environment (7) Furthermore, it has been shown that incorporating CoP into university education can help students gain more confidence, improve their communication skills, build problem-solving skills, and gain practical experience in their field (8)

Students learn actively through involvement in a CoP; in fact, "learning by doing" is one of Wenger's model's characteristics. Adult students benefit from Communities of Practice learning models, which help them prepare for a more effective early college experience.

Identity
The concept of identity in research context has examined with-in Communities of Practice from a sociocultural perspective. Participants in a computer learning course

boosted their self-efficacy and self-esteem, and they felt less excluded than before they started the course, according to their qualitative research. Another significant result was that the Communities of Practice allowed students to refine their talents by allowing them to interact with other students of varying levels of experience in the setting of lessons and social gatherings. Novice learners are not only developing greater competence in a professional related to the transitional nature of a learner in higher education moving from one status to another, but they are also developing greater competence in a professional related to the transitional nature of a learner in higher education moving from one status to another. (9)

Transformational learning

Is another lens through which to evaluate the growth of developing academic professionals and scholars. Transformational learning is defined as "the process of influencing change in a frame of reference" (10) Transformative learning happens when a person's perspective shifts dramatically, resulting in a new frame of reference that will guide future actions. This shift does not occur as a result of a single lived event; rather, it necessitates an individual's critical reflection and reflective dialogue with others in order to explore and clarify the experience. The Communities of Practice served as a forum for sharing reflections with others.

Liminality

Literature proposed that (11) "studenthood," or "the variety of different ways in which registering for an educational program is implicated in people's sense of who they are" is a distinctive identity form related to the transitional nature of a learner in higher education moving from one status to another. For other researchers (12) to examine the concept of a liminal persona or liminality to further this transitional nature of students in higher education. In Turner's research, liminality is used to describe rites of passage in which people go through customs and rituals to acquire new identities while letting go of old ones. Studenthood, according to Field and Morgan-Klein, is a liminal state due to its temporality. It exists in the space between the old identities and the yet-to-be-formed new identities; it is defined by time, which defines when you enter and exit; and it has a set of curricula and conventions that must be completed and mastered before entering into the new identity.

3. Methodology

This paper utilized a **quantitative research method** the researcher has conveniently included 90 students over the last two semesters (1 and 2 Year 2021-22). The reduce the biasness associated with convenience sampling the researcher selected students from two different set-up or mode of teaching, online and in-campus. **Structured questionnaire** was disseminated to the students in an attempt to reveal their perceptions about the components of research identity. The researcher applied both descriptive and inferential statistics, **multiple regression equation** was used to estimate the association levels between the research independent variables i.e. CoP, Li & TL and the dependent

variable students research identity. Further the sampled students are those who have registered for research methodology as a common department requirement subject which is taught at the advanced diploma level i.e. 3rd year of the undergraduate at the University of Technology and Applied Sciences, managerial statistics is a prerequisite for this subject. The students have to present a draft of research proposal that cosmists of three chapters namely, introduction, literature review and research methodology chapter, usually students from **different business management specialization** will form a section / batch of 18-30 students, further subgroups /teams would be formed to carry out the work together, three batches were sampled for this study using **none probability** sampling technique,

4. Data Analysis

Descriptive statistics:
The table below shows the bifurcation of the respondents' specializations i.e. accounting, human resource management and marketing, as it's evident that majority of the students are from accounting specialization followed with human resource management and marketing.

Students by specialization

SN	Specialization	Number of students
1	Accounting	39
2	Human resource management	32
3	Marketing	19

Correlation coefficients analysis

Variables	RI	CoP	LI	TL
RI		0.429**	0.421**	0.253*
CoP			0.309**	0.04
LI				0.419**
TL				

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Multiple regression analysis

Summary Output	
Regression Statistics	
Multiple R	0.5417932
R Square	0.2935399
Adjusted R Square	0.2688959
Standard Error	2.915002
Observations	90

ANOVA				
	df	*SS*	*MS*	*F*
Regression	3	303.63766	101.2126	11.91123
Residual	86	730.76234	8.497236	
Total	89	1034.4		
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	6.1592697	1.5480174	3.978812	0.000144
X Variable 1	0.3076704	0.0843889	3.645863	0.000456
X Variable 2	0.1345919	0.0932293	1.443666	0.152466
X Variable 3	0.199729	0.0841808	2.372619	0.019892

To approach the relationship between student research identity, a multiple regression analysis was conducted to evaluate the prediction of research identity attributed from

community practice, liminality and transformational learning. The results of the multiple linear regression analysis showed that community practice, liminality and transformational learning statistically are significant association between controlling for (IV1, IV2 and IV3). The regression coefficient (B= , p≤0.05)associated with (IV1, IV2 &IV3) suggests that with each additional of IV the DV will increase approximately (0.29). The R2 value of (0.29) associated with the model suggests for 29% of the variation in the DV which means 71% of the variation cannot be explained the IVs alone . The confidence interval associated with the regression analysis doesn't contain (0) which means the null hypothesis to be rejected and thus accept the alternative hypothesis i.e there is a statistically significant association between (IVs &DV)

As mentioned earlier a structured questionnaire was disseminated to 90respondents out of which 90 valid responses were there approximately 85 %, demographic of the sampled group was categorized. Table 1 shows that The test statistic is the F value of 11.9. Using and of .05, Since the test statistic is much larger than the critical value, we reject the null hypothesis of equal population means and conclude that there is a (statistically) significant difference among the population means.

5. Discussion and Conclusion

Carrying out an independent research proposal for the first time could be a challenging task for the undergraduate students, when students have to work in a team which **composed of 2 to 4 members** their capabilities of leaning and communicating with others will highly influence their research identity, the empirical data related to this component reveals that there is a positive association between **communities of practice** and students research identity. This entails that the students' team spirit and leadership qualities will shape his / her research identity, in most of the cases teams are formed from the same area of specialization i.e. accounting, human resources management and marketing so the process of the selecting the topic could be slightly easier which in return makes the process somehow smooth. Contrary to this in some rare cases the team members may be formed from different disciplines, her a multidisciplinary topic would be selected which hinders their interest and add a difficulty to their research.

As young amateur researcher most likely students may face a psychological state of ambiguity, the proposal needs to be submitted in one semester, research methodology is slightly different as compared to other subjects in terms of assessments delivery, even in preparation process for the final viva presentation. Liminal state will no doubt impact on students' research identity formation process, the research data also showed that there a statistical significance relation between **liminality a**nd research identity.

Looking at the third variable in this study **transformational learning it** requires that students have to understand the ideas discussed in class or with respective team members and then try to put these ideas in an evaluative manner that's

enable the audience to get the insight of the points to be addressed, this is evident from the students' literature reviews part of their research which is to be considered as the most difficult part for the students. Despite the fact the association between transformational learning and students' research identity yet it is less significance as compared to communities practice and liminality.

6. Recommendation

1) Practicing the process of identifying problem statement and situation analysis.
2) Enhancing the critical reading strategies, taking notes, building and defending arguments.
3) Improving the teaching and course delivery techniques by applying innovative techniques in relation to project management process as it will build students capabilities in planning, executing and team spirt.
4) Limit the group members to maximum three as larger groups increase the possibility of only limited members are active and rest are not.
5) Group formation should take place at the orientation week of the beginning of the semester.
6) Constructing a data base of previous reports of senior students, this will help in two ways, no reparations of projects, students should feel it is doable and come out of the laminal state.
7) Conducting an on-going training sessions on basics of academic writing, literature reviews , selecting suitable research methods so the students would be more familiar with the terminologies associated with research identity.

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