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Research Article

Effect of Social Media on Learning Effectiveness: Examining the mediating role ofthe Socialization, Externalization, Combination, Internalization and knowledgesharing.

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Abstract: This study examines the mediating role of Nonaka's knowledge spiralsof SECI.Whetherthishasarelationshipwiththeeffectofsocialmediaonknowledgesharingandexamines whether it leads to effective learning. The effect on knowledge sharing through socialmedia which was constructed by Bock et al. (2005) has been used for measuring in this study. Themediating role of SECI on social media and knowledge sharing for effective learning has beenassessed based on the four dimensionsSECI multi-dimensional questionnaire offered by Nonakaet al. (2000) has been used for this study. The results reveal which of the four dimensions of Nonaka's that, which has a significant impact on effective learning using social media & knowledge sharing that has been brought to light from this study. The empirical findings of thisstudymayenable toenrichthetheoreticaland practicalimplications.

Keywords:SocialMedia;KnowledgeSharing;Socialization;Externalization;Combination and Internalization; Effective learning.

Introduction

Thestudyhasbeenconductedwithasampleof521engineeringandmanagementstudentswhoare in the age of 18–34 years with the help of Survey technique and the data which was preparedbased on the earlier studies on similar topics. In this study we had taken upon key frameworksand models relevanttoeffective knowledge and knowledge sharing and synthesized itwith learning and doing through a mediator role of Nonaka's SECI.In the course of thestudy, it has also been found that there exist serial mediations in the areas of: perceptive-sharing-learning,tacit-explicit knowledge in the knowledge spiral.

The motive of this paper is to come up with enhanced understanding on the concepts oflearning-doinginhighereducation.Inveryrecenttimes,theinterestingconceptsofsharing of knowledge and social interactions have been grown remarkably in both theacademicandthebusinessworlds.Understandingofknowledgeisthesourceforcompetitive advantage and has been enhanced through varied frameworks for increasingknowledge-based views (Grant, 1996).Learning which happens, at the individual level,gets transferred to the higher level, and then it can be leveraged to achieve the goals andoutcomes.Though there is a vast amount work in the connection between learning andperformance, and it has been agreed by researchers that there exists a knowing-doing gapPfeffer and Sutton (1999). It has also been absorbed by researchers that there are variousfactors looked in that moderate learning and performance relationships.In this study, wehad identified a mediator which enables the relationship with learning & performance andidentifiedthat thereexist serial mediations in thisprocess.

Backgroundofthestudy

Theomnipresenceofsocialmediaandtheimpactthatithascreatedhasattractedglobal attention Ahmed et al. (2019). The intense development of social media has transformedknowledge sharing and the way of communicating and collaborating with people (Li andSakamoto,2014;Filoetal.2015).SocialNetworking,personalblogsorTwitter,Myspace and Facebook, microblogs, video-sharing applications like Flickr or YouTube,and other collaborative websites like Wikipedia (Osatuyi, 2013; Kaplan and Haenlein,2010; Yan et al. 2013) which are the forums that are used for communicating and sharinginformation.These noticeablesocialmedia tools are entrenchedspaces forcreation ofnew knowledge sharing channels, where people may able to identify individuals of similarinterests forsharingtheirthoughtswith them Bilgihanet al. 2016.

In today's competitive scenario's even higher educational institutions are also adoptingsocial media as a mean for inspiring activities based on learning (Kulakli and Mahony,2014;BalakrishnanandGan, 2016).

During the last few years, there have been researches that are indicating that there is asteady use of social media for sharing knowledgeand it has increasedthe levels ofattention.There are several aspects that signify the learning processes through knowledgethat has been gained from the availability, influence & creation of norms and beliefs, andpower. In a study from Reagans and McEvily (2003) that network range and bonding thateasesknowledgetransfer.

Crossan et al. (1999) has provided a model for organizational learning in four stages.Nonaka (1994) had provided a spiral model for knowledge creation at organizations. Inthis study the author has attempted to integrate the models and presented them, in anintegratedprocess modelforlearningsat highereducational institutions.

Crossan et al. (1999) 4Is are Intuiting, Integrating, Interpreting and Institutionalizing.These processes are internally bi-directional to involve both creation & application ofknowledge at various levels. This model has been used as a frame work to expose theknowledgedimensions.Thechallengesare,thismodeldonotdistinguishtypesofknowledge explicitly, while Nonaka (1994) model is on the distribute between the tacitandexplicitknowledge.Nonaka(1994) arguedthatinhis"spiral" model,"Itisthecontinuous interaction between tacit and explicit knowledge that drives new knowledgecreation; where tacit knowledge is knowledge deeply rooted in action, commitment and isdifficult to codify and explicit knowledge is knowledge that can be transmitted throughformal language". Nonaka, also highlighted that the social interaction trait for knowledgecreation.

Nonakatermedthefourmodesoftheknowledgeconversionas"TacittoTacit–Socialization", "Tacit to Explicit – Externalization", "Explicit to Explicit – Combination"and,"Explicit to Tacit–Internalization".

The study intended that Nonaka's (1994) adaption of the 4I model helped in enhancing bysatisfying the details between the four I-steps, and linking type of the knowledge requiredateverystage.AsCrossanetal.(1999)mention,"Thesubconsciousiscriticaltounderstanding how people come to discern and comprehend something new" (p. -526)fromtheir experience.

Nonaka (1994) labeled the process of conversions as individual tacit knowledge to grouptacit knowledge as Socialization. The base from this enables the perceiving, experience oftheindividual,whichmay betakenastacitknowledge.Thisinterveningconversionthroughsocialization helpsinto thenext 4Iinterprets,aidingthe sharingofexperiences.

The experiences shared through meaningful discussion may lead for conversion of grouptacit knowledge to group explicit knowledge; it is named as Externalization by Nonaka.This explicit knowledge that has been converted at this group level would nurture into thenext level therebyintegratingthe 4I.

The third step integrating is a process for creating combined action of the group, throughalterations and negotiations. This progresses for an in-depth understanding to the mebersthoughstories that arearticulated and repeated.

Nonakalabeledthatknowledgeconversionpractices,socialprocessesforcombiningdifferent bodies or group explicit knowledge as Combination and this group's explicitknowledge that is understood and shared in a more common way by giving examplesthrough stories which is combined to make a role in the 4I process steps through thecommon action suitably and by the way of understanding procedures. The shared feedsintothefinalstepwhichinstitutionalize,wherelearningbecomesentrenchedatorganizationalmemoryWalsh and(1991)throughroutinesandstructures.Theseprocesses of an individual may make influence things dynamically. This conversion ofgroup explicit knowledge to individual tacit knowledge has been defined by Nonaka asInternalization.

There are also various factors that may impact the effective applications of knowledgewhichincludesocialnetworks,informationsystems,andcultureAlaviandLeidner(2001).Knowledge transfer could happen through formal or informal ways Alavi andLeidner (2001). Knowledge that has been transferred through best practice is formalO'Dell andGrayson (1998).

Argote and Ingram (2000) refers that the process of moving knowledge pools as the virtuefortransferringknowledge.Knowledgepoolsrefertoknowledgethatmaybeimplantedinmembers, sub-networks, andin tools &tasks.

Many researchers have looked at the factors that may render relationship between learningandperformance.Hislop(2005)hasalsodiscussedinhisresearchworkthatonlypractice-based perceptions can hypothesizes knowledge as not as object which can beretrieved, codified and stored for

future, but embedded in and inseparable from practiceHislop (2005). Every individual possesses incomplete and contradictory knowledge whichmaybe in dispersed bits.
Polanyi's (1962) conception of tacit knowledge, Polanyi claimed "that there is alwaysmoretowhatcanbeexplainedandnamedthisresidualknowledge"tacitknowledge""and on his work he has often articulated that the dichotomy between explicit and tacitknowledge, , the perception of knowledge entitles that knowledge and learning are rootedinpracticeandconstructedsocially.FurthertoTsoukas(1999)refersonthisKnowledgeis multidisciplinary; ithas been distributedfundamentallyindeterminate.

The knowing perception claims that sharing knowledge or acquiring knowledge happensthrough "rich" social integration and entanglement in practice – by the way of watchingand/or doing Hislop (2005). Tsoukas (1996) states that in (p.-22): "Given the distributedcharacter of organizational knowledge, the key toachieving coordinated action does notso much depend on those "higher up" collecting more and more knowledge, as on those"lower down" finding more and more ways of getting connected and interrelating theknowledgeeach onehas".This is alsomoreapplicable tothehigher educations as well.

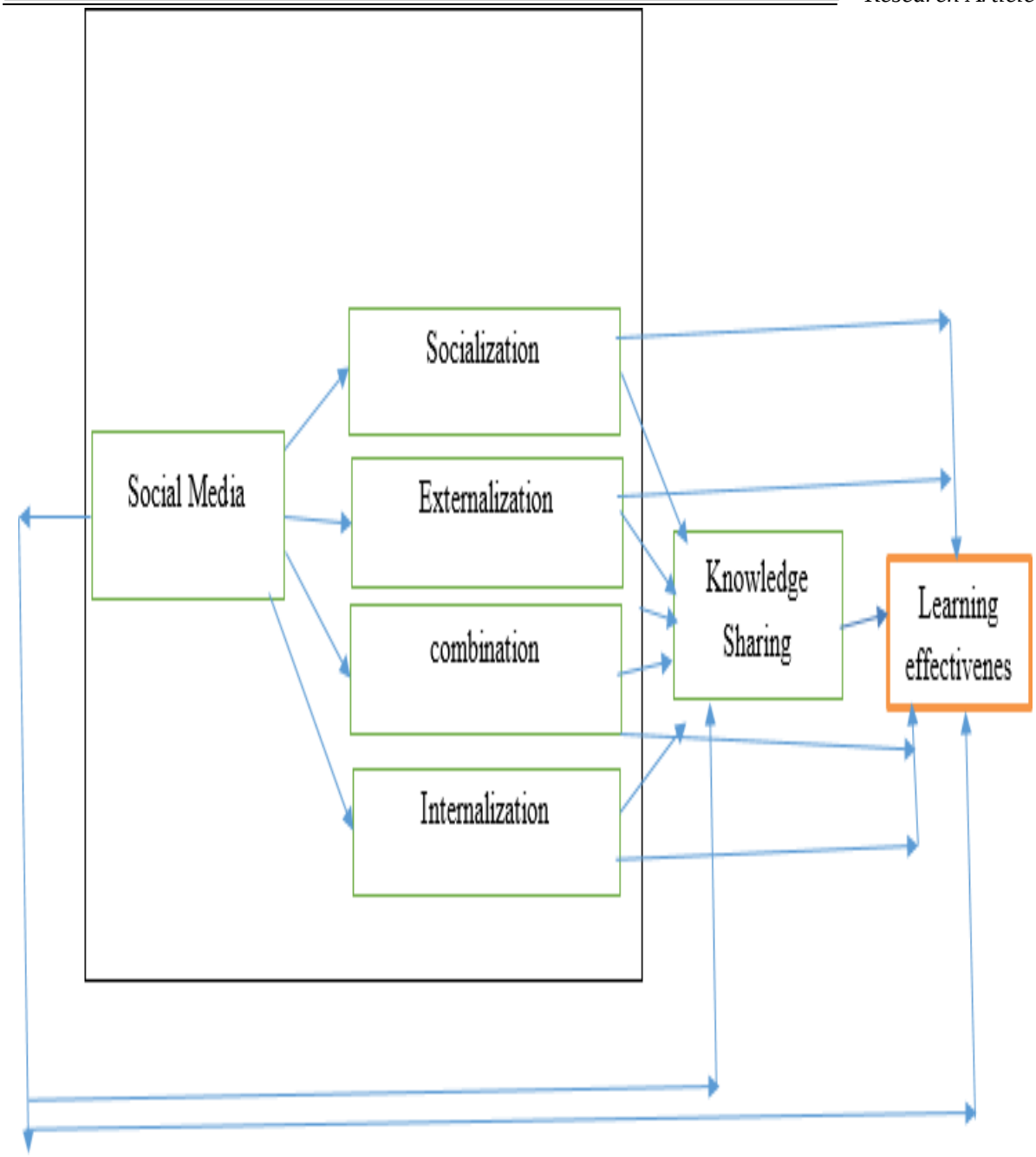
HypothesisDevelopment

Here in this study we will examine the mediating role of Nonaka's four dimensionalvariables Socialization, Externalization, Combination, and Internalization on social media-learning effectiveness.The mediating effect of Nonaka's four dimensions Socialization,Externalization, Combination, and Internalization and networking plays a very importantrole and ease the process of sharing**.**Helping others may provide opportunity for growthandlearningby(WaskoandFaraj2000;Baetal.2001).Forcreationofnewknowledge,sharingofknowledgeandeffectivenessinlearning,howsocialmediaactsasanenablerhasledtothefollowinghypothesis

H1: Impact of social media on knowledge sharing**H2**: Impact of social media on learning effectiveness**H3**:Impact ofsocial mediaon socialization
H4: Impact of social media on externalization**H5**: Impact of social media on combination**H6**: Impactofsocialmediaoninternalization
H7: Impact of socialization on knowledge sharing**H8**: Impact of socialization on learning effectiveness**H9**: ImpactofExternalizationonknowledgesharing
H10: Impact of Externalization on learning effectiveness
H11:Impactofcombinationonknowledgesharing
H12: Impact of combination on learning effectiveness
H13: Impact of internalization on knowledge sharing
H14: Impactofinternalizationonlearningeffectiveness
Creation of new knowledge is a cyclic process and sharing of thoughts both tacit&explicitbetweenindividualandgroup(Blackler,1995;Nonaka&Takeuchi,1995;Bloodgood and Salisbury, 2001) were widely accepted on individual learning as well as ingroupswhichenablesharingforcreationofnewknowledgeandthispaveswayforthehypothesesbelow.
H15: The mediating role of Socialization, Externalization, Combination, andInternalization,on social mediaandlearningeffectiveness
H16: The mediating role of Socialization, Externalization, Combination, andInternalization, on social media and knowledge sharing leading to learningeffectiveness
H17: The mediating role of knowledge sharing in social media and learningeffectiveness
RanjanandKhalil(2007,pp.15-25);intheirresearchtheyhadamentiononhowinstitutescancreatearobustandflourishingknowledgeindeveloping acultureonaccessing, collaborating and managing knowledge.This leads to the hypothesis on howwell higher educational institutions can work on effective learning influenced by creationof new knowledge. (Rowley, 2000; Sohail and Daud, 2009) had also widely discussedthat Universities were warehouse for knowledge generation and dissemination which leadtothe abovehypotheses.

Based on the above-mentioned hypotheses, the author has framed a conceptual model asseeni nt h eFigure 1). From the model it has been observed that social media asindependent and resilient students were able to utilize their skills and strengths using themediator variables of SECI and the outcome variables are knowledge sharing and learningeffectiveness.

Figure– 1:


Socialization
Social Media
Externalization
Knowledge Sharing
Learning effectivenes
combination
Internalization

ModelontheRelationship betweenVariables underthis Study

Procedure

*Sample Population:*521 engineering and management students from National Institute ofTechnology and Indian Institute of Management Tiruchirappalli were taken for this study.Range of age 18–34 years were considered for this study.The sample consisted of68.48%of male and 25.91% of femalestudents.

*Measures:*In this study, we have revealed that in social media and Learning effectiveness,there has a mediation.It also has an indirect effect.The mediating variable may beendogenous and reveals more about it during the process.During the observation of thestudy, this has serial mediation also which has been identified by the items of the scale forthe variables. The following are the standard tools that are used in this study.Professorsandthe research scholarstested the instrument's content validity.

*Research Instrument:*Variables are measured using 5 point Likert scale and 7 point Likertscale.In the 5 point Likert scale, owing to, 5 represents strongly agree and 1 representsstronglydisagreeandinthe7pointLikertscale7representingveryhighand1representing very low. An initial pilot study has been conducted with 50 students and afterthatfew alterationshavebeen made with thescales.

Designofthestudy:Thisstudyisadescriptivestudywithacrosssectiondesign.Studentsof the highereducationalinstitutionwerethe targetaudience.Outof 600collected questionnaires 521 questionnaires were considered for the study and eliminated79 for discrepancies in the submitted data.Out of 521, 61.05% of them were in the agegroup of 18-24, 68.48% of them were male students, 63.04% of them are in the undergraduate levels, 80.05% of them uses social media for sharing knowledge.This studyfollows a cross sectional design with one independent variable and has more than onedependentvariableswhichactasmediatorfortheotherdependentvariables.Thepopulation that is considered for the study was diversified and hence the results can begeneralizedto a biggerpopulation.

Social Media: It was measured with the 5 point ranking scale which has 3 items on thescale.Thevalidated reliabilityof thescale is 0.70.

Nonakas' SECI (Socialization, Externalization Combination and Internalization): Theattributesoftheparticipantsweremeasuredontherankingscalewhichhasbeenconstructed by Nonaka (1995). The scale contains 4 dimensions namely Socialization,Externalization, Combination and Internalization.6 items on Socialization, 5 items onExternalization, 4 items on Combination and 5 items on Internalization.The reliability of thescalesand the values forall the factors wereabove0.6 to0.9.

Knowledge Sharing: Trait resilience was measured on knowledge sharing for the scalecontaining6 scaleitems.Thereliabilitywasmeasuredas0.85.

Learning Effectiveness: For assessing learning effectiveness, a scale of 4 has been used.Thereported reliabilityforthe scale is 0.76 for this study.

Procedure

Respondents were provided the questionnaire in a booklet related to the study, with abriefingbytheresearcheronthecontentandalsothepurposetrailingthisstudy.Eventually, the participants were thanked for their participation and the respondents wereassured that thoseresponses provided by themwillbe kept confidentialandit may beusedonlyforthe purposeof this academicresearch.

Outcome

The study used the Process Macros as it has been recommended by many researchers andsuggested to conduct the mediation process Hayes (2017).Moreover, we have usedprocessmacrotounderstandtheindividualindirectpatheffects,andthiswillcalculateit

morestraightlyforwardlythananyothersoftware.

Table– 1:

Thetablebelowpresentsthedescriptivestatisticsofthescalesandtheirreliabilitycoefficients.

Variables	**Items**	**Population**	**Mean**	**StandardDeviation**	**StandardLoading**	**Reliability(Alpha)**
SocialMedia	3	521	4.87	1.17	0.73	0.70
Socialization	6	521	5.33	1.23	0.83	0.81
Externalization	4	521	5.12	1.22	0.85	0.78
Combination	4	521	4.84	1.19	0.76	0.78
Internalization	5	521	4.73	1.25	0.86	0.82
Knowledge Sharing	6	521	5.55	1.56	0.82	0.85
LearningEffectiveness	4	521	5.34	1.31	0.80	0.76

AnalysisonmediatingroleofSECIsSocialization,Externalization,Combination,Internalization &Knowledgesharingbetween socialmediaandlearningeffectiveness.

There exists a positive regression which concludes that there exists mediation during theprocess. Hence in this study the author explored with the SPSS process macros to identifythemediating effectbetween theindependent and thedependent variable.

From the table below, the confidence intervals from the measured output are 95.0000 andthebootstrap confidenceintervalfrom thesamplesconsidered is5000.

Table– 2:

RunMATRIXProcedure:

```
**************PROCESSProcedureforSPSSVersion3.2.01
*****************

          WrittenbyAndrewF.Hayes,Ph.D.
                                                www.afhayes.comDocu
    mentationavailableinHayes(2018).www.guilford.com/p/hayes3

**************************************************************************
    Model:4
      Y:
      K_
      SX
      :S
      _
      M
    INT:
    INTERS
    O:
    SOCIEx:
    EXTER
    CO:CO
```

MB

SampleS
ize:521

****
**
OUTCOMEVARIABLE:
INTER

ModelSummary
R R-sq. MSE F df1 df2
p
.4190 .1756 .8266 82.1918 1.0000 386.0000
.0000
ModelULCI
coeff se t p LLCI

constant .0000 .0462 .0000 1.0000 -.0907
.0907
S_M .4190 .0462 9.0660 .0000 .3281
.5099

****
**
OUTCOMEVARIABLE:
SOCI

ModelSummary
R R-sq. MSE F df1 df2
p
.1984 .0394 .9631 15.8232 1.0000 386.0000
.0001
ModelULCI
coeff se t p LLCI

constant .0000 .0498 .0000 1.0000 -.0980
.0980
S_M .1984 .0499 3.9778 .0001 .1004
.2965

****
**
OUTCOMEVARIABLE:
EXTER

ModelSummary
R R-sq. MSE F df1 df2
p
.4194 .1759 .8262 82.4081 1.0000 386.0000
.0000
Model
coeff se t p LLCI
ULCI
constant .0000 .0461 .0000 1.0000 -.0907
.0907
S_M .4194 .0462 9.0779 .0000 .3286
.5103

```
**************************************************************************
**
OUTCOMEVARIABLE:
  COMB

ModelSummary
          R        R-sq.         MSE          F          df1          df2
p
      .2729        .0745        .9279     31.0578       1.0000     386.0000
.0000
ModelULCI
                    coeff          se           t           p         LLCI


constant           .0000        .0489       .0000      1.0000      -.0962
.0962
S_M                .2729        .0490      5.5730       .0000       .1766
.3692

**************************************************************************
**
OUTCOMEVARIABLE:
  K_S

ModelSummary
          R        R-sq.         MSE          F          df1          df2
p
      .7380        .5447        .4613     91.4011       5.0000     382.0000
.0000
ModelULCI
                    coeff          se           t           p         LLCI


constant           .0000        .0345       .0000      1.0000      -.0678
.0678
S_M                .1516        .0400      3.7885       .0002       .0729
.2303
INTER              .1521        .0410      3.7136       .0002       .0716
.2326
SOCI               .0853        .0365      2.3385       .0199       .0136
.1570
EXTER              .2401        .0426      5.6306       .0000       .1563
.3240
COMB               .3834        .0415      9.2326       .0000       .3017
.4650

******************DIRECTANDINDIRECTEFFECTSOFXONY
*****************

DirecteffectofXonY
      Effect         se          t          p       LLCI       ULCI
      .1516       .0400     3.7885      .0002      .0729      .2303

Indirecteffect(s)ofXonY:
            Effect      BootSE    BootLLCI    BootULCI
TOTAL       .2860       .0542       .1857       .3954
INTER       .0637       .0215       .0244       .1095
SOCI        .0169       .0088       .0028       .0366
EXTER       .1007       .0289       .0521       .1645
COMB        .1046       .0292       .0518       .1654

************************ANALYSISNOTESANDERRORS
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To testhypothesisthroughmediatingvariableandestablishingrelationshipbetweenindependent and dependent variables, it is required to show that there is an existence of adirecteffectwhichhasmediation,withthefirststepoftheanalysisthatinvolvesregressing as detailed in **Table - 2** that R is positive and is more significant as per theanalysis and there exists a mediation in the study.The **Table - 3** below confirms thevalidityand reliabilityofthe variables.

Table– 3:

	CR	AVE	MSV	MaxR(H)	LEF	KS	INT	CO	SO	EX	SM
LEF	0.848	0.583	0.377	0.853	**0.764**						
KS	0.916	0.645	0.25	0.918	0.5	**0.803**					
INT	0.943	0.769	0.285	0.965	0.369	0.226	**0.877**				
CO	0.849	0.587	0.514	0.875	0.495	0.289	0.469	**0.766**			
SO	0.932	0.695	0.514	0.936	0.614	0.348	0.521	0.717	**0.834**		
EX	0.869	0.625	0.448	0.894	0.496	0.295	0.449	0.613	0.669	**0.791**	
SM	0.907	0.767	0.285	0.958	0.379	0.229	0.534	0.367	0.52	0.443	**0.876**

The inferences forthehypothesismay beunderstood from thetablesbelow for theDirectandindirect effectofthe variables which aredetailed.

Table– 4:

Hypothesis	Direct Path	coeff	se	t-Value	p-Value	LLCI	ULCI	Hypothesis Results
H1	SM->Int	0.419	0.0462	9.066	0.00	0.3281	0.5099	Supported
H2	SM->SOCI	0.1984	0.0499	3.9778	0.00	0.1004	0.2965	Supported
H3	SM->EXT	0.4194	0.0462	9.0779	0.00	0.3286	0.5103	Supported
H4	SM->COMB	0.2729	0.049	5.573	0.00	0.1766	0.3692	Supported
H5	SM->KS	0.1516	0.04	3.7885	0.00	0.0729	0.2303	Supported
H6	*SM->LE*	*0.0606*	*0.0458*	*1.3217*	*0.19*	*-0.0295*	*0.1507*	*NotSupported*
H7	INT->KS	0.1521	0.041	3.7136	0.00	0.0716	0.2326	Supported
H8	SOCI->KS	0.0853	0.0365	2.3385	0.02	0.0136	0.157	Supported
H9	EXTER->KS	0.2401	0.0426	5.6306	0.00	0.1563	0.324	Supported
H10	COMB->KS	0.3834	0.0415	9.2326	0.00	0.3017	0.465	Supported
H11	*INT->LE*	*0.0693*	*0.0469*	*1.478*	*0.14*	*-0.0229*	*0.1615*	*NotSupported*
H12	SOCI->LE	0.3328	0.0413	8.0567	0.00	0.2516	0.414	Supported
H13	EXT->LE	0.1078	0.0499	2.1599	0.03	0.0097	0.206	Supported
H14	COMB->LE	0.1049	0.0516	2.0309	0.04	0.0033	0.2064	Supported
H15	KS->LE	0.236	0.0575	4.1016	0.00	0.1229	0.3492	Supported

Table– 5:

Hypothesis	IndirectEffect	Effect	BootSE	BootLLCI	BootULCI	HypothesisResults
	SM->INT->LE	0.029	0.0208	-0.0099	0.073	NotSupported
	SM->SOCI->LE	0.066	0.0225	0.0279	0.1148	Supported
	SM->EXT->LE	0.0452	0.0235	0.004	0.096	Supported
	SM->COMB->LE	0.0286	0.018	-0.0017	0.0687	NotSupported
	SM->KS->LE	0.0358	0.0147	0.011	0.0679	Supported
	SM->INT->KS->LE	0.015	0.0068	0.0048	0.0308	Supported
	SM->SOCI->KS->LE	0.004	0.0026	0.0005	0.0107	Supported
	SM->EXT->KS->LE	0.0238	0.0096	0.0088	0.0455	Supported
	SM->COMB->KS->LE	0.0247	0.0094	0.0092	0.0456	Supported

Fromtheresultstabulatedabovesocialmediaonlearningeffectivenessdonothaveany direct effect and was not supported.Though the value of $p < .05$ for the 95% confidenceinterval for all the scales, LLCI and ULCI for social media and learning effectiveness andfor Internalization and learning effectiveness was not supported as this has the values [-0.0295, 0.1507] and [-0.0229, 0.1615]. From the **Table - 4** results Social media do nothaveanydirectimpactoneffectivelearning,whereassocialmediacontributesfortacitand explicit knowledge sharing. Knowledge sharing, dissemination of knowledge andeffectivelearninghappens.Hence***H1*** to***H12*** wassupportedexcept ***H2*** and***H12***.

Adding on to the causal approach, this study was conducted to express in respect to thesignificanceofNonaka's(**SECI**-*Socialization,Externalization,Combination,Internalization and Knowledge Sharing*) knowledge creation process that paves way forsocialmediaonlearningeffectiveness.Thestudydeterminestheimportanceoftheindirect effect of the mediator for testing the hypothesis which has a significant differencebetween the total effect and the

direct effect. The indirect effect of the mediator is theproduct of the path which is equivalent to direct effect and indirect effect. The results ofthisstudyconfirm that thereexistsa mediating effect in the relationship.

ToevaluatethepresenceofmediationandtoexaminethetrueindirecteffectsofSocialMediaonLearningEffectivenessviaSocialization,Externalization,CombinationandInternalization (Nonaka's SECI), bias-corrected bootstrapping was used bytherecommendationsofHAYES,A.F.2017&PREACHER,K.J.&HAYES,A.F.(2004).Indirecteffectofsocialmediaonlearningeffectivenessviasocializationandexternalizationwereentirely abovezerofor95%ConfidenceInterval(CI)lowerlimit(LL):0.0279and0.004&upperlimit(UL):0.096and0.096andhenceH13ispartiallysupportedforsocializationandexternalization.However,theindirecteffectofsocialmediaonlearningeffectivenessviainternalizationandcombinationwerenotabovezeroforthe95%ConfidenceInterval(CI)lower limit(LL):-0.0099and -0.0017&upper limit(UL): 0.073and 0.0687 and hence H13 is partially not supported for internalization and combination.Thus,itconfirmsfromtheresultsofthefour-stepmediationanalysis,provideevidencesforpartial mediation.

Thus it confirms from the **Table - 5** that partial mediation effect of Social media onSocialization/ Externalization/ Combination/ Internalization on knowledge sharing andlearning effectiveness is a well-being relationship.Thus it is evident from the results thatfour-stepmediationanalysisprovideevidenceforpartialmediationandhencethehypothesis ***H14*** is supported.

Fromthetablethatthereisamedialrelationshiponsocialmediaandlearningeffectivenessviaknowledgesharingand hencehypothesis***H15***.

TheresultspresentedinTable4&Table5clearlyindicatesthatsocialmediaissignificantlyandpositivelyrelatedtolearningeffectivenessonlythroughmediatorsupportandserialmediationinindirecteffect,whereassocial mediadonothaveany impactoneffectivelearningindirecteffect.HenceNonaka'ssocializationandexternalizationareperfectmediatorintherelationshipofsocialmediaandlearningeffectiveness.

Discussion

The influence of social media on learning effectiveness (Barton et al. 2018; Mughahed etal. 2015; Bicen and Saidkoglu, Chou and Liu 2005) social media on knowledge sharingPee(2018),socialmediaonknowledgecreation(Lyude,2007;Mauroner,2016),knowledge creationonknowledge sharing (Amine, Klamma,Jarke andNaeve2007;Akhaven and Abdali 2012), (Panahi; Watson and Partridge, 2013) knowledge creation onlearning effectiveness (Akhaven, Ramezan and Yazdi, 2014; Berraies, Chaher and Yahia,2014), knowledge sharing and learning effectiveness (Iqbal and Latif, 2018; Wu and Lin2012) has been often discussed and studied. In addition, the influence of SECI has alsobeen documented (Nonaka and Takeuchi, 1995; Nonaka et al. 2008); But the mediatingrole of socialization, externalization, combination and internalization in the social media,learningeffectivenesshasveryscantstudiesinhighereducationalinstitutions.Furthermore, the present study is to understand the driving relationship between socialmedia, socialization, externalization, combination, internalization, knowledge sharing andlearning effectiveness.Further the analysis indicates a causal relationship with socialmedia and knowledge sharing also has a causal relationship with social media and Nonaka'sfour dimensional variables (SECI). Thus it may be assumed that levels of positive affectmaydependontheextentofknowledgecreation,knowledgesharingandlearningeffectiveness.Further, socialmedia,knowledgecreationandknowledgesharingwillpredictthelevelofeffectivelearning.Itcanbeinferredthatsocializationandexternalization might act as a mediator in the relationship of social media with learningeffectiveness based on the causal relationship of the variables. Using Baron and Kenny'sapproach,ithasbeenobservedthatthereexistsapartialmediation.Thusitcanbeassumedtoagreaterextentthat,thecreationofnewknowledgeregulatesthecapacity andtomaintain positive affect and lead towards to knowledge sharing and learning effectiveness. Thehigher the levels of knowledge creation, higher the tendency to find effective learningthrough shared knowledge. Such creations of new knowledge characterize knowledge sharingwhich further leads to learning effectiveness. In other words knowledge creation andknowledgesharingmaylead to effectivelearningvia social media.

Imputations

This research makes an effort to intend on mediating role of knowledge creation in theinterconnectionbetweensocialmediaandeffectivelearning.Duringthiscourseofstudy,ithas been observed

that there is serial mediation on social media on learning effectiveness. Thismayhelptoidentifyandfoundthatbothsocialization,externalizationandalsoknowledge sharing as determinants of social media and effective learning. There are veryscant studies on the mediation analysis on the impact of SECI on social media andlearning effectiveness in the academic area on higher educational institutions. Hence thisstudycanyieldvaluableinsightsforfurtherresearchesandcanidentify,also,new techniques could be discovered to develop the role of social media on effective learningthroughcreation and distribution of new knowledgein thepresent daylearnings.

Limitations

Amajorlimitationinthisstudyisthestudywasconductedonacentrallyfundedinstitution.hence, these results could not be generalized for a diverse population. Hither a largerdiverse sample may lead to better conclusion regarding the mediating role of knowledgecreationandknowledgesharingintherelationshipwithsocialmediaandlearningeffectiveness. In addition, this study is survey-based, whereas an additional experimentalstudyand theirfindingsmayprovideconfidencesduring theconclusions.

Conclusion

The results of this study demonstrate that the creation of new knowledge and sharingleadingtoeffectivelearning.Furthermore,thestudyindicatestheimportanceofsocialization and externalization in SECIs four dimensioned variables which act as apowerful mediator in the relationship, and hence there is a transformation of tacit toexplicitknowledgehappensduringthiscourseofthestudy.Therefore,itcouldbeassumed that the more resilient wherein information can be interpreted in such a mannerto become knowledge, and by maintaining positivity, which may further lead to effectivelearning.

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