

RESEARCH ARTICLE

PERCEIVED TEACHERS' SUPPORT AND ACADEMIC ACHIEVEMENT: MEDIATING ROLE OF STUDENTS' SATISFACTION WITH ONLINE LEARNING IN MEDICAL AND NON-MEDICAL STUDENTS DURING COVID-19

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Abstract

The main objective of the study was to explore the mediating role of students' satisfaction with online learning between perceived teachers support and academic achievements during the pandemic of COVID-19 in Pakistan. It was hypothesized that Students' Satisfaction with Online Learning is likely to mediate between Perceived Teachers' Support and Academic Achievements of Medical and Non-Medical students. It was also hypothesized that non-medical students are likely to be more satisfied with online learning, perceiving more teachers' support and having high academic achievements than the medical students. A sample of 400 students with the age range of 18-22 Medical Students (M=21.68, SD=1.58) and non-medical students (M=21.91, SD=1.53) was collected through convenient sampling strategy from the different institutions. It was a quasi-correlational study. Students' satisfaction with Online Learning Questionnaire, Teachers' Support Scale and Grade Point Average scores for academic achievements were used. Mediated hierarchical regression analysis revealed after controlling the effect of Students Satisfaction with Online Learning (M), the magnitude of Perceived Teachers' Support reduces from the total effect which indicates partial mediation. Sobel z test was also run to check the indirect effect which is also significant. Findings of t test indicated that medical students significantly perceive less teachers' support than non-medical students. Findings of the study are helpful for educational administration, policy makers, course designer, and curriculum developers for organizing the whole online setup new normal. *ASEAN Journal of Psychiatry, Vol. 22(9) November, 2021; 1-10.*

KeyWords: Perceived Teachers' Support, Students' Satisfaction, Academic Achievement, Online Learning, Covid-19.

Introduction

According to World Health Organization coronavirus is a collection of viruses which is rooted of several contagious diseases like sneezing, cough, cold, fever, and respiratory symptoms. In the beginning it was said that Coronavirus was an infectious disease, spreading from animals to humans. It was originated from city of China Wuhan in December 2019 [1]. According to Health Advisory Platform 940k cases is active in Pakistan. Though the vaccine

has launched throughout the world for this pandemic including Pakistan, but still the health of the students is very important as students are significant asset of any state [2]. Research on students of higher studies has been recently conducted during this pandemic and concluded that students have associated many problems with online mode of learning and anxious about their future [3].

That is why; the Government of Pakistan had to shift quickly their education system to

emergency remote teaching to avoid the loss of students in their learning like other developing countries [4]. Remote learning is a process of learning where the students and the instructors or information source are not physically interacted like traditional classroom but through technology like video conferencing by using different apps likewise, Meet, Zoom, Skype and other online assessment [5].

Pakistan is a under developing country when its system of learning was reallocated into online, in the beginning, students faced numerous problems [6].

Teachers' academic support is very significant to resolve such issues of students as recently a study has been conducted by Naseer et al, and explored that teachers' support played a moderating role between students' satisfaction with online learning and academic motivation of undergraduate students [7].

Medical students are facing problems as compare to non-medical students as in a recent study claimed that they faced more issues in their learning due to lack of interaction with patients as well lack of expertise in technology during online learning [8].

Several factors as students' willingness, positive perception, teachers' academic support, academic motivation, and satisfaction are very concerned in such scenario for their online classes in order to get outstanding feedback [8,9].

Literature indicated five elements are very effective for online learning and educational outcomes as faculty satisfaction, students' satisfaction, students' access, learning effectiveness, and institutional cost-effectiveness [10]. In current study two factors teachers' support and students' satisfaction has been highlighted in educational success of the students.

As in previous studies students' success *via* online learning has been influenced by students' satisfaction, focus on program, faculty support and growth in students' enrolment. The main

roots of quality of online learning and students' academic achievement are teaching rather than technology [11].

In teaching, faculty role is very effective to enhance the students' satisfaction and success. In a study human social interactions' effect on students' satisfaction has been evaluated and concluded that the students having high opportunities to get detailed and constructive feedback from, and healthy interaction with the instructors are more satisfied with their online learning experiences [12].

Further the students who have more opportunities to communicate with their teachers and classmates reported greater satisfaction with their online learning activities [12]. Different experts have studied the role of instructors/teachers in different way. For example, Ice et al. explored that audio feedback is more effective than the text-based feed-back form the faculty members to the students [13].

So teachers' involvement and academic support is very important in both to maximizing the academic satisfaction and success of the students. The students having high satisfaction for their learning experiences also showed high GPA claimed by El-Hilali et al. [14]

According to Pekrun Control-Value-Theory learning environment is one of the significant antecedents of students' emotions [15]. He believed on five aspects of the learning environment, as "cognitive quality and task demands, value induction and the motivational quality of instruction, autonomy support, achievement goal structures and achievement expectations, and feedback and consequences of achievement."

To him these are five key components which influence the students' behaviour and emotions directly and indirectly. Achievement Goal Theory (AGT) is also normally implicated to understand the performance of the students proposed by four scholars Ames, Dweck, Maehr, and Nicholls in the late 1970s [16]. Elliott et al. define that "an achievement goal involves a program of cognitive processes that have

cognitive, affective, and behavioural consequence [17].” The theory suggests that the students’ achievement-related behaviour and motivation can be easily interpreted with the help of purposes and causes they adopted while they that are engaged in the learning activities [18-20].

Some of the experts believe that four approaches are very important to achieve a goal, *i.e.*, “Mastery-approach, mastery avoidance, performance approach, and performance-avoidance” [18-21]. The cooperative environment by the faculty and learners’ satisfaction is also very significant [22]. Traditionally, effective teaching is an effective method to achieve the goal. So both external and internal factors influence the students’ success [23].

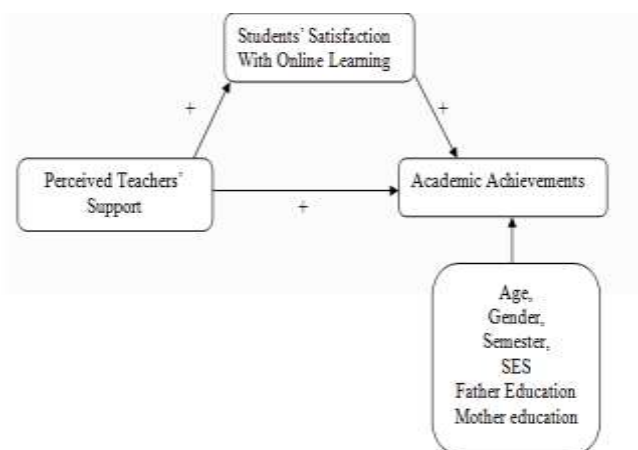
On the basis of literature and theoretical framework the current study highlighted the relationship of two important factors as external factor, teachers academic support, and internal factor, students’ satisfaction (for online learning) with academic achievement of the undergraduate

students in Pakistani context both in medical and non-medical students.

As most of studies conducted to highlight the issues of non-medical students while the medical students are facing more problems than the non-medical. Learning process and educational success of the students is strongly influenced by multiple factors which are students’ satisfaction with the delivered process and content, instructor’s educational support and self-directed learning [24-26], motivation for learning online communication self-efficacy [27-31].

So, with the help of previous literature teachers academic support and students’ satisfaction have a major contribution directly and indirectly to enhance the academic success of the students. So, the current study evaluated the hypothetical modal of mediating role of students’ satisfaction with online learning between perceived teachers’ support and academic achievements as well as comparing the study variables in medical and non-medical students during COVID-19 in Pakistan.

Hypothetical Model



Hypothesis

H1: Students’ Satisfaction with Online Learning is likely to mediate between Perceived Teachers’

Support and Academic Achievement of Medical and Non-Medical students.

III: Non-medical students are likely to be more satisfied with online learning, perceiving more teachers' support and having high academic achievements than the medical students.

Methods

Research design and participants' description

It was a co Quasi Correlational study. The sample was comprised of 400 students with the age range 18-26 as Medical Students (M=21.68, SD=1.58) and Non-medical Students (M=21.91, SD=1.53) from the different universities and medical colleges of Punjab. 177 (43.6%) were the medical students while 223 (56.4) were the non-medical students. Majority of the students belong to middle socio-economic status as average income of their family was 56293.

Assessment measures

Teacher Support Scale is the scale assessed the perceived academic and social support by teachers in their online learning process. The scale is based upon the two subscales of original questionnaire of Classroom life measure which is based upon 90 items. In many studies these subscales have been used to measure teachers' support to their students' instead full scale.

The subscales are consisted 4 items having Cronbach's alpha reliability 0.84 and 0.76. The items of the scale are like 'my teachers like to help me.' The current reliability of teachers support scale is 0.64 [32].

Student Satisfaction with Online Learning [33]. For measuring students' satisfaction for online learning a scale with 16 items constructed by Dziuban et al. was used.

The questionnaire has 0.96 alpha reliability and 3 points Likert scale (1-3) as satisfied, ambivalent and dissatisfied consisting 3 subscales as Engaged learning, agency and assessment. The current reliability coefficient is 0.94.

Academic achievements were measured by university cumulative Grade Point Average (GPA) of that semester in which the students appeared after taking online classes.

Procedure

A formal permission was taken from the authors for using the relevant questionnaires. Permission was also obtained from the concerned institution for data collection. Data was collected through Google form. Data was collected through Google form. The link was shared and the students were given proper instructions.

The participant's consent was taken and also assured them about the confidentiality of the data. Confidentiality and anonymity were maintained.

428 participants participated in the study and submitted their questionnaires in which few were discarded due to incomplete information and the response rate was 93%.

Results

The study explored the relationship among perceived teachers' support, students' satisfaction with online learning and academic achievements of the medical and non-medical students during the pandemic COVID-19. Pearson product Moment correlation was run to find out the relationship among study variables.

Table 1. Inter-correlation of perceived teachers' support, students' satisfaction with online learning, and academic achievements of the medical and non-medical students (N=400).

Variables	1	2	3	4	5	6	7	8	9
1. Age	-	0.05	0.05	-0.07	-0.05	-0.05	-0.07	.11*	0.09
2. Students		-	0.03	-0.08	0.06	-0.02	.12*	0.08	0.07
3. Semester			-	0.05	-0.04	-0.02	0.08	-0.09	0.08
4. SES				-	11*	0.03	-0.03	0.09	0.05
5. FE					-	.14*	0.04	.13*	0.09

6. ME						-	0.02	.15*	.10*
7. PTS							.-	.28***	.14*
8. SS								-	.21**
9. AA									-

Note: * $p < .05$, ** $p < .01$, *** $p < .001$; SES: Socio-Economic Status, FE: Father Education, ME: Mother education, PTS: Perceived Teachers' Support, SS: Students' Satisfaction with Online Learning, AA: Academic Achievements

The findings of Table 1 indicated that parental education (mother and father), perceived teachers' support and satisfaction with online learning has significant positive relationship with academic achievement of the students.

Age and perceived teachers' support are also significantly positively correlated with students' satisfaction with online learning.

The study also discovered the mediating role of students' satisfaction with online learning between perceived teachers' support and academic achievements of the students. hierarchical multiple regression (mediation) analysis of students' satisfaction with online learning, and perceived teachers' support as predictors of academic achievements was run by following Barron approach.

Table 2. Hierarchical multiple regression (mediation) analysis of students' satisfaction with online learning, and perceived teachers' support as predictors of academic achievements.

Students' satisfaction with online learning (M)			Academic achievements (DV)				
Direct effect			Direct effect		Indirect effect		Total effect
	ΔR^2	B	ΔR^2	β	ΔR^2	β	β
Predictors	0.07***		0.08***		0.39***		0.54***
ME		-0.09		-0.08		-0.03	-0.11
PTS		0.27***		0.28***		0.13***	0.41***
SS				0.58***			
Total R^2							0.54***
N							400

Note: *** $p < 0.001$, ME: Mother education, PTS: Perceived Teachers' Support, SS: Students' Satisfaction with Online Learning

In Table 2 Analysis 1 revealed that 8% variance has explained by model as $F(2,397) = 19.19$, $p < 0.001$. Perceived Teachers' Support significantly predicts Academic achievements of the students.

Analysis 2 accounted 7% variance explained by the model as $F(2,397) = 17.12$, $p < 0.001$ in Students Satisfaction with Online learning.

Perceived Teachers' Support is the significant predictor of Students Satisfaction with Online learning. 39% variance is explained by the model in Analysis 3 as $F(3,396) = 88$, $p < 0.001$. This indicates that Students Satisfaction with Online Learning (M) is significantly predicting the Academic Achievements of the students.

After controlling the effect of Students Satisfaction with Online Learning (M), the magnitude of perceived Teachers Support

reduces from the total effect which indicates partial mediation. Sobel z test was also run to

check the indirect effect which is also significant.

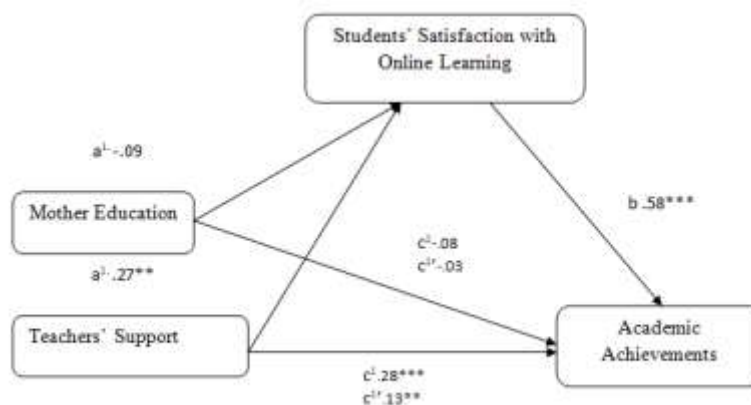


Figure 1. Model depicting the mediating role of student’s satisfaction with online learning between teachers’ support and academic motivation.

a1=path a direct relationship between Age, teachers’ support (IV) and Students’ Satisfaction with online learning (M). b=direct relationship between students’ satisfaction with online learning (M) and academic achievements (DV). c1=direct (total) relationship of teachers’ support

(IV), mother education and academic achievements (DV), c1’=the relationship of teachers’ support (IV) mother education and academic achievements (DV) after controlling students’ satisfaction with online learning (M).

Table 3. Comparison of medical and non-medical students on perceived teachers’ support, satisfaction with online learning, and academic achievements (N=400).

Variables	Medical students (n=177)		Non-medical students (n=223)		t(398)	P	95% CI		Cohen’s d
	M	SD	M	SD			LL	UL	
PTS	4.46	1.87	5.12	1.63	-2.45	0.05	-2.61	-0.27	0.3
SS	6.80	2.11	6.77	2.02	0.14	0.52	-0.37	0.43	
AA	2.98	0.60	2.97	0.60	0.21	0.98	-0.10	0.13	

Note: *: $p < 0.05$, PTS: Perceived Teachers’ Support, SS: Students’ Satisfaction with Online Learning, AA: Academic Achievements.

The findings of Table 3 indicated that there is a significant difference perceived teachers support between medical and non-medical students.

Discussion

The study evaluated the positive relationship between perceived teachers’ support, and students’ satisfaction with online learning among medical and non-medical students. Current findings are in line with the previous one as the support of instructor and quality of teachers’

Mean scores revealed that non-medical students perceive more teachers’ support ($t(398) = -2.45$; $p < 0.05$) than the medical students.

involvement has a positive impact on students’ satisfaction and learning. Nature of faculty support and quality of instructors is the most important factor to enhance the students’ satisfaction, which lead to the effective educational outcomes. If the teachers are responsible in delivering their course and support their students to resolve all the academic issues,

this process leads to high satisfaction of the learners and improve the learning process either in physical or online. As in current findings teachers' support significantly predicted the students' satisfaction with online learning and their satisfaction also significantly produce academic achievement of the learners. Teachers' understandings of their learners also ensure the students' satisfaction.

Current findings are in line with the previous one as teachers' support in academic activities is positively correlated with their level of satisfaction. As the teachers support their students, their satisfaction for their learning process is also increased.

In current situation of Pakistan due to Pandemic of COVID-19 teachers support has become more critical in learning process. As in present study teachers' academic support has a positive relationship both with students' satisfaction and academic achievements of the students. Internet teaching can be more effective if instructors are more efficient and aware to deliver the lectures by using web-based applications, because in modern era educational process has become more active and fast in such scenario when the whole world has shifted their learning process into online.

If the students are satisfied with their learning experiences, academic needs and learning outcomes and receiving the guideline from their teachers then these factors work more powerfully to enhance their satisfaction and educational outcome is claimed by Snopce et al. as same findings showed in present study. The current findings are in line with the previous one as the students are more satisfied with online learning needs and engaged in academic process by the help of their instructors, they showed high achievements.

Level of satisfaction can be enhanced with the quality of interactions between the learners and instructors. As positive relationship was explored between teachers' academic support and students' satisfaction in their learning process in present study. Teaching quality leads towards students' satisfaction and students' satisfaction

enhance the academic outcomes. Mensink et al. explained that students' performance is the outcome of teachers and students efforts. If teachers deliver their best students also get interest in their learning process which leads towards high performance of the students. In present findings teachers' support directly influencing the performance of the students.

As teachers academic support is the significant predictor of academic achievements. When students are satisfied with their learning experiences with the support of their instructors, this factor also significantly predicted the students' outcomes. So, it can be concluded, students' performance is the centre pole of any educational institution and the entire system revolves around this factor. Students' performances and achievements determine the success or failure of an academic institution.

Conclusion

Therefore, this phenomenon was explored in current time when the whole education system has altered into online and teachers' support has become very critical. The study contributed in the previous literature by highlighting the impact of teachers' academic support as well as students' satisfaction with their learning experiences directly and indirectly with the academic achievements of the students.

Somehow the current findings have been discussed in the previous literature and findings are in line with the current findings both in foreign and Pakistani studies.

Limitations/ Suggestion/Recommendations for Future Research

The sample was only comprised from Punjab. Further study can be conducted through Pakistan especially in remote areas where online facilities are not suitable. Only 400 participants who were taking online classes currently were comprised in the study and it was limited sample for medical and non-medical students. It was a quantitative study limited to the few variables.

Further qualitative study can be conducted and evaluate the several barriers and factors in

academic achievements of the students *via* online learning. It should also be studied the effectiveness and crises of online learning in under develop and develop countries. Moreover, future researcher must do a commutative study the job satisfaction level of teachers in online and physical classes.

Although the online learning has the advantages including comfortless, accessibility and remote learning but also have some draw backs such as lack of participations, maintaining academic honesty. The future researchers must conduct a training program to train the teachers about using online equipment's, developing lesson plans etc., and compare the results as pre and post study.

Implications of the Findings

Findings of the study are helpful for educational administration, policy makers, course designer, and curriculum developers for organizing the whole online setup new normal. Not only in online but in traditional classrooms teachers' interaction and involvement is very important both for students' satisfaction and their learning outcomes.

So educational policies should be modified and teachers' role should be maximized in learning process for the success of educational system. Additionally, develop the training programs for teachers to enhance the productivity in teaching methods during online learning.

References

1. Gopal R, Singh V, Aggarwal A. Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies*. 2021; 26: 1-25.
2. Khan YH, Mallhi TH, Alotaibi NH, Alzarea AI, Alanazi AS, Tanveer N, et al. Threat of COVID-19 vaccine hesitancy in Pakistan: the need for measures to neutralize misleading narratives. *The American Journal of Tropical Medicine and Hygiene*. 2020; 103: 603-604.
3. Aristovnik A, Keržič D, Ravšelj D, Tomaževič N, Umek L. Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. *Social sciences*. 2020; 12: 8438.
4. Noor S, Ali MN, Husnine SM. Performance of online classes in Lahore, Pakistan during Covid-19. *Performance Improvement*. 2020; 59: 33-42.
5. Ray AE, Greene K, Pristavec T, Hecht ML, Miller-Day M, Banerjee SC, et al. Exploring indicators of engagement in online learning as applied to adolescent health prevention: a pilot study of REAL media. *Educational Technology Research and Development*. 2020; 68: 3143-3163.
6. Adnan M, Anwar K. Online Learning amid the COVID-19 Pandemic: Students' Perspectives. *Journal of Pedagogical Sociology and Psychology*. 2020; 2: 45-51.
7. Naseer S, Rafique S. Moderating role of teachers' academic support between students' satisfaction with online learning and academic motivation in undergraduate students during COVID-19. *Education Research International*. 2021; 2021: 1-9.
8. Bączek M, Zagańczyk BM, Szpringer M, Jaroszyński A, Woźakowska KB. (). Students' perception of online learning during the COVID-19 pandemic: A survey study of Polish medical students. *Medicine*. 2021; 100.
9. Schrum L. Online teaching and learning: Essential conditions for success. In *Distance learning technologies: Issues, trends and opportunities*. 2000; pp: 91-106.
10. Abel R. Implementing best practices in online learning. *Educes Quarterly*. 2005; 28: 75-77.
11. Moore JC. The Sloan Consortium quality framework and the five pillars. The Sloan Consortium. Retrieved. 2005; 21: 3-4.
12. Shea P, Swan K, Fredericksen E, Pickett A. Student satisfaction and reported

- learning in the SUNY learning network. Elements of quality online education. 2002; 3: 145-156.
13. Ice P, Curtis R, Phillips P, Wells, J. Using asynchronous audio feedback to enhance teaching presence and students' sense of community. *Journal of Asynchronous Learning Networks*, 2007; 11: 3-25.
 14. El-Hilali N, Al-Jaber S, Hussein L. Students satisfaction and achievement and absorption capacity in higher education. *Procedia-Social and Behavioural Sciences*. 2015; 177: 420-427.
 15. Pekrun R. The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*. 2006; 18: 315-341.
 16. Elliot AJ. A conceptual history of the achievement goal constructs. *American Psychological Association*. 2005. pp: 52-72.
 17. Elliott ES, Dweck CS. Goals: An approach to motivation and achievement. *Journal of personality and social psychology*. 1988; 54: 5.
 18. Pintrich PR. The role of motivation in promoting and sustaining self-regulated learning. *International Journal of Educational Research*. 1999; 31: 459-470.
 19. Elliot AJ, McGregor HA. A 2x2 achievement goal framework. *Journal of Personality and Social Psychology*. 2001; 80: 501.
 20. Schwinger M, Stiensmeier J. Performance-approach and performance-avoidance classroom goals and the adoption of personal achievement goals. *British Journal of Educational Psychology*. 2011; 81: 680-699.
 21. Hansen G, Ringdal R. Formative assessment as a future step in maintaining the mastery-approach and performance-avoidance goal stability. *Studies in Educational Evaluation*, 2018; 56: 59-70.
 22. Ames C, Archer J. Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*. 1988; 80: 260.
 23. Clayton K, Blumberg F, Auld DP. The relationship between motivation, learning strategies and choice of environment whether traditional or including an online component. *British Journal of Educational Technology*. 2010; 41: 349-364.
 24. Lin B, Hsieh C. Web-based teaching and learner control: A research review. *Computers and Education*. 2001; 37: 377-386.
 25. McVay M. Developing a web-based distance student orientation to enhance student success in an online bachelor's degree completion program. Unpublished practicum report presented to the Ed. D. Program, Nova South-eastern University, Florida. 2000.
 26. McVay M. How to be a successful distance learning student: Learning on the Internet. Pearson Custom Pub. 2000.
 27. Deci EL, Ryan RM. The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*. 1985; 19: 109-134.
 28. Ryan RM, Deci EL. Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*. 2000; 25: 54-67.
 29. Fairchild AJ, Horst SJ, Finney SJ, Barron KE. Evaluating existing and new validity evidence for the Academic Motivation Scale. *Contemporary Educational Psychology*. 2005; 30: 331-358.
 30. Hung ML, Chou C, Chen CH, Own ZY. Learner readiness for online learning: Scale development and student perceptions. *Computers and Education*. 2010; 55: 1080-1090.

31. Roper AR. How students develop online learning skills. *Educes Quarterly*. 2007; 30: 62-64.
32. Johnson AE. A nursing faculty's transition to teaching online. *Nursing Education Perspectives*. 2008; 29: 17-22.
33. Dziuban C, Moskal P, Thompson J, Kramer L, DeCantis G, Hermsdorfer A, et al. Student Satisfaction with Online Learning: Is It a Psychological Contract? *Online Learning*. 2015; 19: 2.

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