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## Relationship among Learning Needs, Institutional Support and Assessment Experiences of Distance and Online Learners: A Survey Study

Mubeshera Tufail <sup>1</sup>

**Abstract:** *The objective of this study was to analyze the relationship between learning needs, institutional support, and the assessment experiences of students enrolled in distance and online learning programs. Cross-sectional quantitative survey design was used to collect the data from distance learners. In total, 518 distance learners submitted their responses for this study. The Learning Needs Questionnaire (LNQ) (Ho & Lim, 2021), Institutional Support Questionnaire (Lim & Ho, 2022), and Assessment Experiences Questionnaire (TESA Tools, 2019) were used to obtain responses from students enrolled in various distance education programs. It was found that although there was a moderate and statistically significant relationship among the three variables, the statistical results for the three scales showed different patterns for some demographic variables, i.e., age group, degree program, semester of the study, region, and academic performance. It is recommended that the needs and perspectives of students be taken into account in order to provide them with effective learning services and assessment experiences. For this purpose, comprehensive profiling of students and their feedback on courses every semester with the help of the latest technological resources may be helpful to provide them with relevant support and facilitation in the teaching-learning and assessment process.*

**Key Words:** Learning Needs, Distance and Online Learning, Assessment Experiences, Institutional Support, University Students, Teaching-Learning Process

### Background

Distance offers opportunities and challenges for the teaching-learning process. The opportunity is increased access to education to a wider population of students, whereas the challenge is to design a lively interaction in the process of instruction (Parker, 1999). A well-designed course structure in distance and online learning systems is required to cover the lack of social interaction among students. Further, teachers may design learning activities that can promote social interaction (Langedgård, Kiani, Nielsen & Svensson, 2021).

It was reported (Wong, 2020) that online education effectively met the learning needs of autonomy and competence, but the arousal and relatedness needs were not met. Online learning was not successful in motivating or sustaining the attention of students, although students had access to relevant electronic equipment and technical support. Shorter attention span and perceiving learning as a responsibility were the reasons for it. The changing needs and nature of human interaction were the reasons for the unmet 'relatedness' needs of students (Wong, 2020).

Identification of problems in distance learning systems and solutions to deal with these problems are widely investigated nowadays (Mintii et al., 2021). A study conducted in three countries 'Portugal,' 'UAE' and 'Ukraine,' reported three concerns, namely time management, motivation, and English language skills mentioned by distance learners. The researchers recommended offering pre-distance education courses to build the competencies of students related to their concerns (Fidalgo et al., 2020). Other reported hardware/software problems, technical problems, lack of opportunity to communicate with the teacher,

<sup>1</sup> Lecturer, Department of Early Childhood Education and Elementary Teacher Education, Allama Iqbal Open University, Islamabad, Pakistan.

▪ **Corresponding Author:** Mubeshera Tufail ([mubeshera.tufail@aiou.edu.pk](mailto:mubeshera.tufail@aiou.edu.pk))

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difficulty in self-organization, and high level of distraction. Teachers and students may be provided the opportunity to develop digital competence skills (Mintii et al., 2021).

Keeping in view the review of the related research work, this study was planned to be conducted in order to analyze the relationship between the learning needs of learners, the institutional support provided for their learning, and their assessment experiences while they were studying in distance and online learning programs. This study may be helpful for institutions offering distance and online learning programs so that they can adjust their support according to the unique and contextualized learning needs of students while also working on improving their experience with the institutional services and student learning assessment system.

## Literature review

The three-dimensional model of an e-learning system encompasses three principles of knowledge acquisition: anytime, anywhere, and at any speed (Tokarieva et al., 2021). Distance may refer to geographical distance, time distance, and possibly cognitive distance (Simonson et al., 2019). Distance and online learning systems involve the application of the same principles. The purpose of distance is to provide educational facilities through the use of ICT technologies for educational programs, keeping in view the standards of education for those programs (Ministry of Education and Science of Ukraine Order, 2013).

With a wide range of digital technological resources, distance, and online systems have diversified the flexible learning opportunities for learners (Kara et al., 2019). Moodle is a commonly used platform as LMS in universities due to its wide range of features and user-friendly interface. It can easily be modified according to the needs of courses or institutions (Mintii et al., 2021). However, it is important to keep the distance and online learning system local, specific, and contextual while keeping in view the large, general, and global system of distance learning in order to provide flexible opportunities and modalities across a varied spectrum of possibilities (Traxler, 2018).

A number of distance learners continue their education along with their employment and family responsibilities. Therefore, distance and online systems have learners with varied characteristics. This variation and diversity of distance learners pose unique challenges for them to continue their education in distance and online learning systems. Therefore, it is important to understand and develop the connection between learners' characteristics and the appropriateness of online learning environments for effectively responding to their learning needs (Kara et al., 2019).

In order to provide effective learning experiences to distance and online learners, the institutions must examine the operational IT infrastructure and the potential of new technological advancements. The technological infrastructure needs to be updated from time to time in order to support the teaching-learning process in the virtual environment. Upgradation of the technological infrastructure may emphasize the efficient network resource utilization to achieve the knowledge acquisition principles, i.e., anywhere, any time (Bojović et al., 2020) and at any speed. It encompasses the technical and educational aspects. The feedback from students and teachers at the end of a semester may be collected along with the assessment of student learning. It would be helpful to revise the existing educational practices, introduce new teaching methods, and update the existing curriculum (Bojović et al., 2020).

There are three different positions of inquiry in assessment. Institutions reflect to learn from the assessment process and ensure campus-based discussions that collect knowledge and establish structures and procedures to insert mutually agreed changes in the system. These changes may be at the institutional or program level to address the patterns of improvement in the student's performance. Students, when reflecting on what they learned and did not know, provide educators with the evidence to evaluate the efficacy of educational practices. Instead of emphasizing what students have/have not learned, teachers must focus on long-term skills and abilities to apply and integrate learning and diversify their pedagogical practices, keeping in view the diverse characteristics of learners (Maki, 2023). Student motivation and engagement are important factors in their learning experiences. Therefore, in order to develop a system with long-term effectiveness, the institutions must focus on the student's experiences (Rajabalee & Santally, 2020).



## Research Questions

The research study focused on addressing the following research questions:

- i. How are the learning needs, assessment experiences, and institutional support for the learning process associated with each other for students in distance and online learning systems?
- ii. What is the pattern of association among learning needs, assessment experiences, and institutional support for various demographic groups of students in distance and online learning systems?

## Methodology

The research study involved quantitative survey research design. All the students enrolled in master's and bachelor's programs in distance and online education programs in Pakistan were the population of the study. The sample comprised 518 students selected through a stratified sampling technique. The Learning Needs Questionnaire (LNQ) developed by Ho and Lim (2021), the Assessment Experience Questionnaire (AEQ) (V3.3) (TESA Tools, 2019), and the Institutional Support Questionnaire (ISQ) (developed by Lim & Ho, 2022) were used to collect the data from the students. LNQ and ISQ were seven-point scales, whereas AEQ was a five-point scale. The number of items in these research instruments is mentioned in Table 01. As shown in Table 1, Cronbach's alpha value for the Learning Needs Questionnaire (LNQ), Institutional Support Questionnaire (ISQ), and Assessment Questionnaire (AEQ) showed a better internal consistency of these research instruments. Data were collected through Google Forms by approaching students through online platforms (WhatsApp/LMS/Email). The data were analyzed using the mean, standard deviation, and Spearman correlation coefficients.

**Table 1**

*Cronbach's alpha value for LNQ, ISQ, and AEQ*

S#	Factor	No of items	Cronbach's alpha value
1	Learning Needs Questionnaire (LNQ)	33	.948
2	Institutional Support Questionnaire (ISQ)	47	.970
3	Assessment Experience Questionnaire (AEQ)	28	.784

## Findings

This section provides analysis of the data for determining the relationship among learning needs questionnaire (LNQ), institutional support questionnaire (ISQ) and assessment experience questionnaire (AEQ). This analysis also covered the relationship among these scales for various demographic groups.

**Table 2**

*Descriptive Analysis of Responses of Distance Learners on LNQ, ISQ, and AEQ*

Research Instrument	Sample (N)	Mean (M)	Standard Deviation (SD)
Learning Needs Questionnaire (LNQ)	518	6.27	.51
Institutional Support Questionnaire (ISQ)	518	6.13	.65
Assessment Experience Questionnaire (AEQ)	518	3.55	.24

Table 2 showed the cumulative mean score of responses of distance learners on three scales: Learning Needs Questionnaire (LNQ), Institutional Support Questionnaire (ISQ) and Assessment Experience Questionnaire (AEQ). The mean response was above average and was around 'agree'. The mean score was high on LNQ as compared to other two scales.

**Table 3**

Gender-wise analysis of the relationship among LNQ, ISQ, and AEQ

Demographic Group	Factor	N	M <sup>4</sup>	SD <sup>5</sup>	LNQ <sup>1</sup>	ISQ <sup>2</sup>	AEQ <sup>3</sup>
Overall	LNQ <sup>1</sup>	518	6.27	.51	-	.704 (.000)	.398 (.000)
	ISQ <sup>2</sup>	518	6.13	.65	.704 (.000)	-	.418 (.000)
	AEQ <sup>3</sup>	518	3.55	.24	.398 (.000)	.418 (.000)	-
Male	LNQ <sup>1</sup>	112	6.35	.46	-	.773 <sup>6</sup> (.000)	.403 (.000)
	ISQ <sup>2</sup>	112	6.23	.72	.773 <sup>6</sup> (.000)	-	.422 (.000)
	AEQ <sup>3</sup>	112	3.53	.24	.403 (.000)	.422 (.000)	-
Female	LNQ <sup>1</sup>	404	6.25	.51	-	.683 (.000)	.415 (.000)
	ISQ <sup>2</sup>	404	6.11	.63	.683 (.000)	-	.436 (.000)
	AEQ <sup>3</sup>	404	3.55	.25	.415 (.000)	.436 (.000)	-

LNQ<sup>1</sup>= Learning Needs Questionnaire; ISQ<sup>2</sup>= Institutional Support Questionnaire; AEQ<sup>3</sup>= Assessment Experience Questionnaire; M<sup>4</sup>= Mean score; SD<sup>5</sup>= Standard Deviation; x<sup>6</sup>= strong relationship

Table 3 shows the relation among LNQ, ISQ, and AEQ. All the scales had a statistically significant relation with each other. For the study sample, the relationship among the three scales was moderate and statistically significant. The relationship among the three scales was calculated separately for male and female distance learners in the sample of the study. For male students, the relationship between LNQ and AEQ was moderate and statistically significant, as in the case of female students. The relationship between LNQ and ISQ for female students was moderate. However, for male students, LNQ and ISQ were strongly correlated with each other. It indicated that a positive change in ISQ means a positive change in LNQ and vice versa. The support required by students for various aspects of the learning process is strongly related to the support provided by the institution for the learning process.

**Table 4**

Program-wise analysis of the relationship among LNQ, ISQ, and AEQ

Demographic Group	Factor	N	M <sup>4</sup>	SD <sup>5</sup>	LNQ <sup>1</sup>	ISQ <sup>2</sup>	AEQ <sup>3</sup>
Overall	LNQ <sup>1</sup>	518	6.27	.51	-	.704 (.000)	.398 (.000)
	ISQ <sup>2</sup>	518	6.13	.65	.704 (.000)	-	.418 (.000)
	AEQ <sup>3</sup>	518	3.55	.24	.398 (.000)	.418 (.000)	-
MS/MPhil	LNQ <sup>1</sup>	16	6.06	.34	-	.503 (.000)	.250 (.000)
	ISQ <sup>2</sup>	16	6.02	.58	.503 (.000)	-	.408 (.000)
	AEQ <sup>3</sup>	16	3.59	.22	.250 (.000)	.408 (.000)	-

LNQ<sup>1</sup>= Learning Needs Questionnaire; ISQ<sup>2</sup>= Institutional Support Questionnaire; AEQ<sup>3</sup>= Assessment Experience Questionnaire; M<sup>4</sup>= Mean score; SD<sup>5</sup>= Standard Deviation



Table 4 shows the correlation between the three scales for the study sample and the respondents from MS/MPhil programs. The relationship among LNQ, ISQ, and AEQ for students of various programs, i.e., BS/BBA, B.Ed. (1.5/2.5/04 years) and MA/MSc was found to have similar values, as displayed in Table 4 for the overall sample of the study. It was a moderate and statistically significant relationship among LNQ, ISQ, and AEQ for these programs. For MS/MPhil students, the relationship between LNQ and ISQ and ISQ and AEQ was moderate and statistically significant, whereas the relationship between LNQ and AEQ was very weak and statistically significant. This means that a change in the learning needs of the students of MS/MPhil programs does not necessarily mean a change in their assessment experiences at the same rate.

**Table 5**

*Analysis of the relationship among LNQ, ISQ, and AEQ with respect to students from various areas of the country*

Demographic Group	Factor	N	M <sup>4</sup>	SD <sup>5</sup>	LNQ <sup>1</sup>	ISQ <sup>2</sup>	AEQ <sup>3</sup>
Overall	LNQ <sup>1</sup>	518	6.27	.51	-	.704 (.000)	.398 (.000)
	ISQ <sup>2</sup>	518	6.13	.65	.704 (.000)	-	.418 (.000)
	AEQ <sup>3</sup>	518	3.55	.24	.398 (.000)	.418 (.000)	-
Baluchistan	LNQ <sup>1</sup>	21	6.24	.55	-	.822 <sup>6</sup> (.000)	-.209 (.363)
	ISQ <sup>2</sup>	21	6.24	.49	.822 <sup>6</sup> (.000)	-	-.266 (.244)
	AEQ <sup>3</sup>	21	3.50	.15	-.209 (.363)	-.266 (.244)	-
Sindh	LNQ <sup>1</sup>	28	6.49	.45	-	.648 (.000)	.162 (.411)
	ISQ <sup>2</sup>	28	6.26	.69	.648 (.000)	-	.463 (.013)
	AEQ <sup>3</sup>	28	3.59	.27	.162 (.411)	.463 (.013)	-

LNQ<sup>1</sup>= Learning Needs Questionnaire; ISQ<sup>2</sup>= Institutional Support Questionnaire; AEQ<sup>3</sup>= Assessment Experience Questionnaire; M<sup>4</sup>= Mean score; SD<sup>5</sup>= Standard Deviation; x<sup>6</sup>= strong relationship

Table 5 displays the relationship among LNQ, ISQ, and AEQ for the overall sample of the study and for the students from Baluchistan and Sindh. The relationship among the three scales for the overall sample of the study was moderate in nature and was statistically significant. The relationship among LNQ, ISQ, and AEQ for students from various areas of the country, i.e., Azad Jammu and Kashmir, Islamabad, Punjab, Khyber Pakhtunkhwa, and Gilgit-Baltistan, was found to have similar values as displayed in table 05, for the overall sample of the study. The relationship between LNQ and ISQ was very strong for students from Baluchistan. This means that the learning needs of students were strongly associated with the support provided by the institutions. The relationship between LNQ and AEQ, as well as AEQ and ISQ, was weak and negatively associated with each other for students from Baluchistan. It indicated that the change in assessment experiences of students would not necessarily mean a change in the learning needs of students and the support provided by the university, and vice versa. The relationship between LNQ and AEQ for students from Sindh was also very weak, indicating that a positive change in the learning needs of the students may not refer to a change in their assessment experiences at the same rate.

**Table 6**

Age-wise analysis of the relationship among LNQ, ISQ, and AEQ

Demographic Group	Factor	N	M <sup>4</sup>	SD <sup>5</sup>	LNQ <sup>1</sup>	ISQ <sup>2</sup>	AEQ <sup>3</sup>
Overall	LNQ <sup>1</sup>	518	6.27	.51	-	.704 (.000)	.398 (.000)
	ISQ <sup>2</sup>	518	6.13	.65	.704 (.000)	-	.418 (.000)
	AEQ <sup>3</sup>	518	3.55	.24	.398 (.000)	.418 (.000)	-
31-35 years age group	LNQ <sup>1</sup>	28	6.22	.56	-	.557 (.002)	.213 (.275)
	ISQ <sup>2</sup>	28	5.91	.76	.557 (.002)	-	.279 (.150)
	AEQ <sup>3</sup>	28	3.59	.28	.213 (.275)	.279 (.150)	-

LNQ<sup>1</sup>= Learning Needs Questionnaire; ISQ<sup>2</sup>= Institutional Support Questionnaire; AEQ<sup>3</sup>= Assessment Experience Questionnaire; M<sup>4</sup>= Mean score; SD<sup>5</sup>= Standard Deviation; x<sup>6</sup>= strong relationship

Table 6 shows a correlation among LNQ, ISQ, and AEQ for the overall sample of the study and for the students of 31-35 years of age group. The relationship among the three scales for the overall sample of the study was moderate in nature and was statistically significant. The relationship among LNQ, ISQ, and AEQ for students from various age groups, i.e., 16-20 years, 21-25 years, 26-30 years, and 36-45 years of age groups, had similar values as displayed in table 06 for the overall sample of the study. For the age group 31-35 years, LNQ and AEQ, and ISQ and AEQ were weakly associated with each other, and this association was statistically non-significant. It showed that the change in the learning needs of students and institutional support for students may not indicate a change in their assessment experiences at the same rate.

**Table 7**

Semester-wise analysis of the relationship among LNQ, ISQ, and AEQ

Demographic Group	Factor	N	M <sup>4</sup>	SD <sup>5</sup>	LNQ <sup>1</sup>	ISQ <sup>2</sup>	AEQ <sup>3</sup>
Overall	LNQ <sup>1</sup>	518	6.27	.51	-	.704 (.000)	.398 (.000)
	ISQ <sup>2</sup>	518	6.13	.65	.704 (.000)	-	.418 (.000)
	AEQ <sup>3</sup>	518	3.55	.24	.398 (.000)	.418 (.000)	-
2 <sup>nd</sup> semester	LNQ <sup>1</sup>	40	6.05	.68	-	.806 <sup>6</sup> (.000)	.296 (.064)
	ISQ <sup>2</sup>	40	5.84	.86	.806 <sup>6</sup> (.000)	-	.437 (.005)
	AEQ <sup>3</sup>	40	3.51	.21	.296 (.064)	.437 (.005)	-
3 <sup>rd</sup> semester	LNQ <sup>1</sup>	71	6.19	.45	-	.463 (.000)	.192 (.109)
	ISQ <sup>2</sup>	71	6.03	.54	.463 (.000)	-	.221 (.064)
	AEQ <sup>3</sup>	71	3.50	.25	.192 (.109)	.221 (.064)	-

LNQ<sup>1</sup>= Learning Needs Questionnaire; ISQ<sup>2</sup>= Institutional Support Questionnaire; AEQ<sup>3</sup>= Assessment Experience Questionnaire; M<sup>4</sup>= Mean score; SD<sup>5</sup>= Standard Deviation; x<sup>6</sup>= strong relationship



Table 7 shows the correlation among LNQ, ISQ, and AEQ for the overall sample of the study and for the students of the second and third semesters of the degree programs. The relationship among the three scales for the overall sample of the study was moderate in nature and was statistically significant. The relationship among LNQ, ISQ, and AEQ for students of various semesters of the study, i.e., first, fourth, fifth, and sixth semesters, and the alumni, had similar values as displayed in Table 7 for the overall sample of the study. LNQ and AEQ for the students of the second and third semesters were weakly associated with each other. It means that any change in the assessment experiences of the students (of the second and third semesters) does not necessarily mean a change in their learning needs. Similarly, by looking at the correlation value between AEQ and ISQ for students of the third semester, a change in their perception of the institutional support for student learning does not indicate a change in their assessment experiences. Although the correlation values for the last three results interpreted here are statistically non-significant, it does not mean that it does not exist.

**Table 8**

*Analysis of the relationship among LNQ, ISQ, and AEQ with respect to the percentage of marks in the previous semester*

Demographic Group	Factor	N	M <sup>4</sup>	SD <sup>5</sup>	LNQ <sup>1</sup>	ISQ <sup>2</sup>	AEQ <sup>3</sup>
Overall	LNQ <sup>1</sup>	518	6.27	.51	-	.704 (.000)	.398 (.000)
	ISQ <sup>2</sup>	518	6.13	.65	.704 (.000)	-	.418 (.000)
	AEQ <sup>3</sup>	518	3.55	.24	.398 (.000)	.418 (.000)	-
31-50%	LNQ <sup>1</sup>	15	6.34	.44	-	.527 (.043)	.163 (.562)
	ISQ <sup>2</sup>	15	6.14	.49	.527 (.043)	-	.279 (.315)
	AEQ <sup>3</sup>	15	3.52	.21	.163 (.562)	.279 (.315)	-
51-60%	LNQ <sup>1</sup>	53	6.22	.52	-	.654 (.000)	.151 (.281)
	ISQ <sup>2</sup>	53	6.12	.50	.654 (.000)	-	.115 (.414)
	AEQ <sup>3</sup>	53	3.56	.22	.151 (.281)	.115 (.414)	-
81-90%	LNQ <sup>1</sup>	96	6.29	.57	-	.802 <sup>6</sup> (.000)	.461 (.000)
	ISQ <sup>2</sup>	96	6.23	.70	.802 <sup>6</sup> (.000)	-	.376 (.000)
	AEQ <sup>3</sup>	96	3.57	.25	.461 (.000)	.376 (.000)	-
91-100%	LNQ <sup>1</sup>	24	6.36	.54	-	.827 <sup>6</sup> (.000)	.566 (.004)
	ISQ <sup>2</sup>	24	6.22	.63	.827 <sup>6</sup> (.000)	-	.366 (.079)
	AEQ <sup>3</sup>	24	3.50	.29	.366 (.079)	.566 (.004)	-

LNQ<sup>1</sup>= Learning Needs Questionnaire; ISQ<sup>2</sup>= Institutional Support Questionnaire; AEQ<sup>3</sup>= Assessment Experience Questionnaire; M<sup>4</sup>= Mean score; SD<sup>5</sup>= Standard Deviation; x<sup>6</sup>= strong relationship

Table 8 shows a correlation among LNQ, ISQ, and AEQ for the overall sample of the study and for the students who have secured 91-100%, 81-90%, 51-60%, and 31-50% marks in their previous semester. The

relationship among the three scales for the overall sample of the study was moderate in nature and was statistically significant. The relationship among LNQ, ISQ, and AEQ for students who have secured 61-70% and 71-80% marks in their previous semester had similar values, as displayed in Table 08 for the overall sample of the study. For groups of students with 51-60% and 31-50% percentage marks, the relationship between LNQ and AEQ, as well as ISQ and AEQ, was weak and statistically non-significant. It indicated that a change in assessment experiences does not indicate a change in the learning needs of the students, and a change in institutional support does not mean a change in the assessment experiences of students. For groups of students with 81-90% and 91-100% percentage of marks, the relationship between LNQ and ISQ was strong and statistically significant. It means that a change in the learning needs of the students may indicate a change in their perception of institutional support for their learning.

**Table 9**

*Relationship among LNQ, ISQ, and AEQ with respect to the employment status of students*

Demographic Group	Factor	N	M <sup>4</sup>	SD <sup>5</sup>	LNQ <sup>1</sup>	ISQ <sup>2</sup>	AEQ <sup>3</sup>
Overall	LNQ <sup>1</sup>	518	6.27	.51	-	.704 (.000)	.398 (.000)
	ISQ <sup>2</sup>	518	6.13	.65	.704 (.000)	-	.418 (.000)
	AEQ <sup>3</sup>	518	3.55	.24	.398 (.000)	.418 (.000)	-
Part-time employment in a private institution	LNQ <sup>1</sup>	86	6.35	.45	-	.826 <sup>6</sup> (.000)	.466 (.000)
	ISQ <sup>2</sup>	86	6.31	.48	.826 <sup>6</sup> (.000)	-	.478 (.000)
	AEQ <sup>3</sup>	86	3.60	.21	.466 (.000)	.478 (.000)	-

LNQ<sup>1</sup>= Learning Needs Questionnaire; ISQ<sup>2</sup>= Institutional Support Questionnaire; AEQ<sup>3</sup>= Assessment Experience Questionnaire; M<sup>4</sup>= Mean score; SD<sup>5</sup>= Standard Deviation; x<sup>6</sup>= strong relationship

Table 9 showed a correlation among LNQ, ISQ, and AEQ for the overall sample of the study and for the students who were working part-time in private institutions. The relationship among the three scales for the overall sample of the study was moderate in nature and was statistically significant. The relationship among LNQ, ISQ, and AEQ for students of various groups based on their employment status, i.e., full-time student, part-time employee in government institutions, full-time employee in government institutions, and full-time employee in government institutions, had similar values as displayed in table 9 for the overall sample of the study. The relationship between LNQ and ISQ for students working part-time in private institutions was strong and statistically significant. It means that a change in the learning needs of the students of this group may refer to a change in their perception of institutional support for the learning process and vice versa.

## Discussion

The purpose of the study was to measure the relationship among responses of distance learners on LNQ, ISQ, and AEQ. Although the relationship among the three scales for the overall sample of the study was moderate in nature and was statistically significant, the correlation analysis for some of the demographic groups was different. A strong correlation between LNQ and ISQ, as observed for male students, students from Baluchistan, and students working part-time in private institutions, indicated the learning needs of the students were strongly associated with the institutional support services for the learning process. A study by Cicha et al. (2021) reported that the strong self-efficacy level of distance learners positively affected perceived usefulness and the ease of use of distance learning experiences. Perceived usefulness (students' perception that they will get more out of distance learning as compared to the traditional face-to-face classroom) affected their attitude toward distance learning. However, teachers should guide their





students in developing their motivation and self-belief to learn and to cope with anxieties (Stevanović et al., 2021).

Kara et al. (2019) highlighted various internal, external, and program-related challenges faced by distance learners. Orientation sessions/programs related to time management, learning strategies, and technical problems to deal with internal challenges. External challenges can be resolved by offering flexibility in courses and programs, keeping in view the personal traits of learners and contextualized solutions for each factor involved. It can be inferred that there is no one-size-fits-all solution. Instead, there must be an emphasis on contextual factors and characteristics of adult learners. Further, dynamic assessment tools and learning analytics can be helpful in resolving the problems faced by distance learners and designing effective learning opportunities for them (Kara et al., 2019).

A weak relationship between LNQ and AEQ, as observed in the case of MS/MPhil scholars, students of age group 31-35 years, students in the second and third semester of their studies, and students of different academic performance levels (i.e., students with 51-60% and 31-50% marks in their previous semester), pointed out that the learning needs of students and their assessment experiences are very weakly associated with each other. This means that universities have to work on both aspects separately. They have to deliberately focus on their assessment system in order to improve students' assessment experiences. Their learning needs may be related to the teaching-learning process, so the institutions may work on improving the teaching-learning process to meet their learning needs effectively. There was a weak and statistically non-significant negative relationship between the LNQ and AEQ, as noticed in the case of students from Baluchistan. It may indicate that institutions must place a balanced emphasis on both aspects in order to improve the students' assessment experiences and fulfill their learning needs. Technology can be a significant factor that either promotes or hinders the use of e-learning by students and teachers. The latest technology can provide quality learning experiences at a lower cost (Elfirdoussi et al., 2020).

A weak relationship between ISQ and AEQ, as observed for the students of age group 31-35 years, students in the third semester of their studies, and students of different academic performance levels (i.e., students with 51-60% and 31-50% marks in their previous semester), depicted that the institutional support provided for the learning process may not be associated with the assessment experiences of the students. It suggests that universities must deliberately work on designing the assessment system in order to improve the student's experiences with it, besides facilitating the students in the learning process. Distance learners must have access to adequate support systems to reach out to learning resources and services. Assessment must be based on specific learning outcomes of the instructional process (Simonson et al., 2019). In order to motivate distance learners to self-learning, there is a need to provide them with diversified learning activities (Lassoued et al., 2020).

## Conclusion

The purpose of the study was to analyze the relationship among the learning needs, institutional support, and assessment experiences of students studying in distance and online learning systems. Based on the study results, it was concluded that all three variables were moderately associated with each other. However, the analysis of the relationship among these variables for various demographic groups such as age groups, degree programs, semester of the program, academic performance groups, and region showed some interesting results. It can be inferred that keeping in view the diverse demographic groups of students, the university must adopt a flexible approach to address their learning needs and assessment experiences and to provide them with support for the learning process. Technological resources and feedback from the students can help analyze their experiences and needs in a particular semester so that the universities can adapt their services to the students' needs and experiences.

Analysis of the needs and experiences of students throughout their studies must be a continuous process, as we noticed a difference in the association among learning needs, assessment experiences, and institutional support for the students from various semesters. The mixed-methods research study and longitudinal research work on this topic may be helpful in understanding this phenomenon in detail. The use of other data collection tools may provide useful data on this topic. The use of a larger sample size with a quantitative research design may also confirm the findings of this study.

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