

Validity and Reliability of the Sense of Belonging Instrument with Online Graduate Nursing Students

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Abstract - Higher education places a significant priority on student retention. Retention has been linked to a feeling of belonging in the workplace, according to research. Valid and dependable instruments for undergraduate students include the Sense of Belonging Instrument (SOBI). However, the instrument's validity and reliability have yet to be proved in relation to graduate students in the nursing field. Validity and reliability of the SOBI were established in this descriptive research. Three nursing professors from graduate schools evaluated each item to ensure its content authenticity. In the faculty's opinion, the instrument was thorough and each question expressed a feeling of belonging. The SOBI was given to 315 nursing graduate students for the sake of dependability, and 112 of them completed the test. Cronbach's Alpha was used to prove the system's dependability. The instrument's dependability was found to be 0.903. It will be necessary to do further research in the future to establish the best effective strategies for fostering a feeling of community. With the use of the SOBI, it can also be determined whether or not a feeling of belonging improves retention.

Index Terms—distant education, sense of community, sense of belonging, virtual sense of community, digital interventions

I. Introduction

Education is no longer a one-way flow of information from instructor to student. Instead, it refers to community education that emphasises group work, project completion, the exchange of ideas with others, as well as the development of self-confidence and the ability to meet one's own personal objectives [1–3]. While the popularity of social virtual worlds has grown in recent years, little is known about how students' personal characteristics influence their participation in online education [4]. An online nursing programme at a prominent Texas institution was rated worse than their past campus-based experiences by students who attended.

Students believe that digital learning aspects have a lesser value than face-to-face educational encounters, according to a recent study [5]. When comparing online/distance education to conventional, face-to-face

encounters, there are several contrasts (both good and bad). To help students succeed and graduate, it's critical to analyse how technology may help them succeed and graduate, as this discussion is taking place throughout the country's higher education institutions.

Student retention is a major issue in modern technology integrated learning settings despite their numerous benefits. To provide one example, online learning has a far greater dropout rate than classroom-based learning does [6]. When advising and engaging students in remote education, it is essential to include standards and best practises from proven experiences. However, integrating all stakeholders in the implementation of new technology is a solid strategy.

II. Sense Of Community (SOC)

Psychologists have written extensively on the importance of having a sense of community (SOC). It is said that SOC is a "feeling of belonging that members have, a sense that members matter to one another and to the group, and a shared faith that members' needs will be satisfied by their commitment to be together" [7], p. 9]. It seems that a student's feeling of belonging is an important factor for all types of students, including those who study face-to-face and those who learn online. Research shows that students' feeling of belonging is linked to their academic advancement, academic perseverance, and social acceptability as colleges seek to attract more online students to raise enrollments [8]–[10]. Noncognitive elements, such as a student's feeling of belonging, have also been found to influence their academic performance and retention [11]. Student persistence is best predicted by a student's feeling of belonging, according to research [12].

III. Sense Of Virtual Community (SOVC)

In the context of technology-mediated communication, SOVC is described as "the individual's impression of belonging, identification, and connection to a specific community" (13). When an online student has a favourable impression of their college experience, it might spur them on to more active involvement in the online community. With the use of Microsoft Teams to provide live virtual orientations, for example, the objective is to impact the community and foster a feeling of belonging among online students.

Purpose of the study

Cronbach's alpha is a common statistic used to describe the reliability of instruments in published scientific education research. In studies regarding test creation and application, this statistic has been referred to as "the most important and prevalent statistic," to the point that its use in multiple-item assessments is considered regular.

With the help of online graduate nursing students, this research set out to verify and assess the instrument's dependability [22]. Only nursing students at the undergraduate level were tested for this instrument's reliability and validity in the past. Further study will be undertaken comparing a feeling of belonging between non-live intervention and technology-delivered live virtual intervention for the online graduate nursing population. Is the SOBI instrument reliable and valid for online graduate students? This was the primary research question for this study. SoBI's reliability was tested using descriptive statistics in a quantitative investigation, which focused on the instrument's validity.

IV. Method

Sample: It was sent to 315 current online graduate students at a prominent institution in Texas who were receiving it by email. The survey had a response rate of 36%, with a total of 121 responses. To conduct this research, the Institutional Review Board has given its approval (IRB). Only 12% of the participants were male, while 88% were female. In addition, just 25% of the participants were from Texas, while 75% of the participants were from elsewhere in the country. 112 people shared this information, and the average age was 40.01. All of the participants were registered nurses with a bachelor's degree.

Instrument: SOBI [22] was used as a model for this instrument's design. It was determined that the instrument's content validity had been reviewed by a panel consisting of seven experts, each of whom had knowledge in ideas connected to belonging. Each item was found to be related to the concept of belonging by three faculty members from a graduate nursing school.

Each of the 13 questions on the SOBI adaption is scored on a 5-point Likert Scale, with 1 denoting "strong disagreement" and 5 denoting "strong agreement."

V. Data Analysis

A Content validity

Before, the instrument had been shown to be reliable and valid for undergraduate students. Graduate nursing students, on the other hand, haven't utilised it yet. Since the instrument was tested by three graduate nursing faculty members, its content validity was verified. Each item was unanimously agreed upon by the panel of experts as a representation of the idea of belonging. Additionally, they all felt that the questions asked covered all aspects of the topic at hand.

B Reliability analysis

Cronbach's alpha was used to obtain internal consistency estimates of reliability for the 13-item SOBI instrument. The remaining 11-item scale was determined to be extremely dependable after two items were removed to boost the alpha (11 items; = 0.903). This level of analysis reveals a high degree of consistency in the results.

VI. Discussion

As a consequence of this research, we now have even more proof of the instruments' dependability and validity. The findings show conclusively that the SOBI instrument measures the feeling of community among online graduate nursing students. This research presents a valid and reliable tool that may be used to examine if virtual orientation therapies and other techniques can help people feel more at home.

Students who feel a part of something are more likely to do well in school and graduate. Using the instrument, we can figure out which strategies are most effective in getting us there. It is possible to see whether technology may be utilised to foster a feeling of community among students and, as a result, improve their academic performance. Tests of digital interventions emphasising valued participation for all students at the institutions are crucial for fostering a feeling of belonging and enrolment as graduate enrollment numbers continue to decline.

VII. Opportunities for future research

Because of the instrument's provenance, there are several avenues for further investigation.

Using the acquired demographic data as a starting point for future investigation will allow us to determine the importance of any differences between the groups. Individual orientation sessions using Blackboard's learning management system and live, virtual orientation sessions via Microsoft Teams will be studied in order to determine the distinctions between the two types of participants. If students who finish their undergraduate degree at the same school have a much greater level of belonging than those who complete their undergraduate degree elsewhere, this is the second measure of difference that should be examined. Additionally, demographic data such as participant age, relationship status, years of nursing experience, hours per week they work, and status as a legal guardian of a kid will be taken into consideration.

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