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From the "Vicious Cycle of Education" to the "Cadre Building Ecosystem": A Pathological Analysis of the Teaching Assistant Project from the Perspective of Academic Activists

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Article Info

Article type:

Research Article

Article history:

Received 14 May, 2025

Received in revised form 14

Sep. 2025

Accepted 11 Oct. 2025

Published online 01 Jun. 2026

Keywords:

Teaching Assistant,
Accreditation/Validation,
Higher Education,
Islamic Azad University

ABSTRACT

Objective: The main objective of this study was to redesign the Teaching Assistant (TA) scheme model at Islamic Azad University by examining the current system and identifying effective policies and strategies for improving its structure and performance.

Methods: This study was applied in purpose and employed a mixed-methods approach using a sequential exploratory design. The research population included full-time faculty members, teaching assistants, department heads, and students at Islamic Azad University. In the qualitative phase, 60 participants were selected through purposive sampling based on the criterion of theoretical saturation, including 10 full-time professors, 10 teaching assistants, 10 department heads, and 30 students. Data were collected through semi-structured interviews. The qualitative data were analyzed using Clarke and Braun's (2006) thematic analysis method.

Results: The analysis of the qualitative data resulted in the identification of the main dimensions of the proposed model, including the pathology of the current situation, transformation policies and strategies, and expected outcomes. The findings revealed that the existing teaching assistantship model requires a shift from a primarily executive-oriented approach to a more educational-professional framework.

Conclusions: The redesigned model emphasizes empowerment, continuous monitoring, and the clear definition of job responsibilities for teaching assistants. This framework can serve as a practical guideline for policymaking and contribute to improving the effectiveness and efficiency of the teaching assistantship system at Islamic Azad University.

Cite this article: Mohajerpour, R., Hasani, R. & Abdollahi, F. (2026). From the "vicious cycle of education" to the "cadre building ecosystem": a pathological analysis of the teaching assistant project from the perspective of academic activists. *Iranian Journal of Educational Research*, 5 (2), 1-26.

. DOI: <https://doi.org/10.22034/5.2.1>



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DOI: <https://doi.org/10.22034/5.2.1>

Publisher: University of Hormozgan.

Introduction

Higher education, as one of the fundamental and vital pillars in the social, economic, and cultural development of any country, provides an appropriate platform for the production of knowledge, innovation, and technology. In addition to accelerating economic growth, this system prepares human resources with the necessary skills to enter the labor market and plays a key role in responding to complex global challenges such as climate change and health crises. Hence, the development of higher education systems and ensuring equal access to educational opportunities have always been among the strategic priorities of governments and international organizations (Nazarzadeh Zare, 2021).

In this regard, and within the context of Iran's higher education, Islamic Azad University, considering the extensive volume of scientific activities of faculty members and the need for optimal management of human resources, has implemented the "Teaching Assistant Scheme." This scheme, utilizing the capacity of Ph.D. students, was designed with the aim of reducing the workload of professors and compensating for the shortage of instructional staff, and its third recruitment call was operationalized in 2024 after conducting empowerment courses and receiving executive feedback. In this structure, teaching assistants act as a communicative bridge between the professor and the student, facilitating deep learning through holding problem-solving sessions and group workshops.

The importance of this role becomes more evident when its multidimensional impacts on the teaching-learning process are considered. Gottardello and Karabag (2022) showed that the presence of a teaching assistant possessing effective communication skills and content mastery has a significant impact on enhancing the quality of learning. Furthermore, Chen et al. (2023) state that these individuals, by helping to solve problems and clarify ambiguities during learning, provide an opportunity for individualized interaction, which leads to a deeper understanding of concepts by students. Beyond the educational dimensions, Neaum and Noble (2023) emphasize the psychological and social role of assistants; as their support leads to increased self-confidence, academic motivation, and reduced feelings of isolation in the academic environment. Aref (2021) also enumerates benefits such as managing overcrowded classes, freeing up professors' time for research, and the professional development of the assistants themselves as positive consequences of the presence of this role.

Nevertheless, comparative reviews show that there are considerable differences between the higher education system of Iran and Western countries in this regard. While in the West, the assistantship period is considered part of the systematic process of training future professors, in Iran, the focus is more on acquiring teaching experience, and formalized training for it has not yet been fully institutionalized (Nazarzadeh Zare, 2021). Studies show that the efficiency of teaching assistants is highly dependent on experience and training. Smith and Delgado (2021) found that novice assistants need sufficient time to grow in order to shift their focus from individual skills to impacting students' learning. Also, Shum et al. (2021) emphasized the importance of the ability to collaborate with the educational team, and Wilson and Summers (2020) emphasized their central role in managerial and educational tasks. On the other hand, Filz and Gurung (2013) described assistants as readily available facilitators, and Muzny and Shah (2023) also classified their competencies into personal, educational, collaborative, and research dimensions.

Despite the mentioned strategic benefits and the implementation of the teaching assistant scheme at Islamic Azad University, a review of the research literature indicates the lack of a comprehensive, localized, and valid model for the optimal selection, training, and employment of these individuals within the specific structure of this university. Considering this scientific and executive gap, the present study is conducted with the aim of "designing and validating an effective teaching assistant model at Islamic Azad University" to take a step toward improving the quality of education and the productivity of this scheme by providing a scientific framework.

Material and Methods

The present study is "applied" in terms of purpose, and in terms of its nature and implementation method, it falls into the category of "mixed-methods" research with a "sequential exploratory" approach. In this type of research, to overcome the limitations of unidimensional methods and achieve a deeper understanding of the phenomenon under study, the researcher combines methods, data sources, and analytical techniques in a single project (Strijker et al., 2020). In the sequential exploratory design, which is a smart choice for designing and validating models, the research process is organized into two main phases: first, the qualitative phase was conducted to discover the components and formulate the initial framework of the model, and then the quantitative phase was conducted to measure, generalize, and validate the results obtained from the first phase. As

Leavy (2022) points out, in this method, first, the recognition of the meanings and dimensions of the phenomenon is achieved through qualitative methods, and then quantitative instruments and indicators (such as questionnaires) are formed based on the qualitative findings. In fact, the results of the qualitative section contribute to the growth and development of the model, and the quantitative section plays the role of validating it (Delavar & Koushki, 2014).

The research field in this study included all full-time professors, heads of educational departments, active teaching assistants, and students of Islamic Azad University, Sanandaj Branch, in the academic year 2023-2024. Due to the two-stage nature of the research, the participant selection process also varies. In the qualitative phase (model design), a “purposive” sampling method was used. The inclusion criteria for selecting participants in this section included having a continuous record of activity as a full-time professor, an official decree as a department head, teaching assistants, and students of Islamic Azad University, Sanandaj Branch, and a conscious willingness to participate in the research. The sample size at this stage was subject to the law of “theoretical saturation”; meaning that the interviews continued until no new data were obtained and the categories reached repetition. Exclusion criteria also included an unwillingness to continue collaboration or a deficiency in providing the required information.

The data collection instruments were “semi-structured interviews”. The interview protocol is developed after an in-depth review of the theoretical background and in consultation with the supervisor and advisory professors. To ensure the face and content validity of the interview questions, the initial framework was provided to a group of experts and specialists in the fields of educational sciences and educational administration, and their corrective feedback was implemented. In the quantitative phase (validation), based on the components extracted from the interviews, a “researcher-made questionnaire” was designed. The reliability of this questionnaire was measured using the “Cronbach’s alpha” coefficient to ensure the internal consistency of the instrument.

Data analysis was also carried out at two levels. In the qualitative section, Clarke and Braun’s (2006) “thematic analysis” method was used to extract, organize, and richly describe the data. This method, as Thelwall (2022) states, goes beyond word counting and focuses on identifying implicit and explicit ideas and semantic networks within the data. Coding was performed in two stages:

basic themes and organizing themes. In the quantitative section, the validation of the designed model was carried out using the Delphi method utilizing SPSS software.

Results

Demographic Description of the Participants in the Four Stakeholder Groups

The participants included 30 students, 15 teaching assistants, 10 department heads, and 10 faculty members. The student sample consisted of 30 individuals, of which regarding gender composition, 28 (93.3%) were female and 2 (6.7%) were male. In terms of educational level, the participants were studying in continuous bachelor's, discontinuous bachelor's, and associate degree programs, and regarding their years of study, they were in the range of the 3rd to 7th semester; with the highest frequency belonging to 3rd-semester students. Disciplinary diversity in this group included humanities (psychology, law, management, accounting, elementary education, English language), technical and engineering (architecture, software, mechanics, biomedical engineering), and other disciplines (physical education, nursing).

The sample of the teaching assistants group consisted of 15 individuals, whose gender distribution included 10 females and 5 males. The educational background of these individuals was in the disciplines of management (educational and public), psychology, law, computer science, mathematics, architecture, and accounting. In terms of activity experience, the participants' assistantship history varied between 1 to 6 semesters. Furthermore, the university teaching experience in this group had considerable dispersion; such that its range encompassed individuals with no teaching experience (1 year) to highly experienced individuals (10 years).

In the group of educational administrators (department heads), 10 individuals participated, comprising 6 males and 4 females in terms of gender. From the perspective of academic rank, the majority of the members (9 individuals) held the rank of assistant professor, and 1 individual held the rank of associate professor. The teaching experience in this group was in the time range of 11 to 22 years, indicating the high experience of the participants. The academic specialties of the department heads included diverse disciplines such as psychology, physics, sociology, Persian literature, civil engineering, law, educational administration, agriculture, accounting, and computer engineering.

The faculty members group included 10 individuals, whose gender composition consisted of 6 males and 4 females. The distribution of academic rank in this group included 7 assistant professors and 3 associate professors. The range of teaching experience of the faculty members varied between 8 to 22 years. These individuals specialized in the disciplines of management (business and educational), computer engineering, literature, psychology, civil engineering, architecture, law, and chemistry, and were engaged in research.

Combined Response to the First Sub-Question: SWOT Analysis of the Teaching Assistant Scheme from the Perspective of the Four Stakeholder Groups

Synthesis of the Weaknesses of the Teaching Assistant Scheme from the Perspective of the Four Stakeholder Groups

This table, by integrating the themes extracted from the perspectives of students, teaching assistants, department heads, and faculty members, depicts a comprehensive picture of the weaknesses of continuing the current status of the scheme.

Table 1. Combined analysis of the weaknesses of the teaching assistant scheme from the perspective of the four stakeholder groups

Basic Themes (Extracted codes segregated by group)	Organizing Themes
From the students' perspective: They are awful, many of them have a low academic level, they have no literacy at all, they were hired with illiteracy, inexperience and lack of knowledge, they leave questions unanswered, explanations of some things are unclear, they fall short in answering challenging questions. From the department heads' perspective: Lack of mastery over specialized content, weakness in academic foundation, inability to answer conceptual questions, lack of sufficient experience, inability to bridge theory with practice, theoretical knowledge without work experience. From the faculty members' perspective: Little experience in teaching, low academic level, unfamiliarity with teaching techniques, being immature/novice, lack of mastery over classical texts, superficiality of analyses, inability to transfer subject matter.	1. Weakness in scientific, professional, and pedagogical competencies
From the TAs' perspective: We are unaware of our performance status in teaching, we don't know if the path we are taking is right or not, lack of evaluation of TAs' performance. From the department heads' perspective: There is no clear mechanism, a blind administrative process, the finalization process is time-consuming, lack of real assessment, selection based on guesswork, lack of a professional ethics filter. From the faculty members' perspective: Not all students should be allowed to participate, compulsion in selection, glaring flaw in the screening process, lack of specialized interviews, disregard for personality competencies.	2. Lack of a standardized system for selection, evaluation, and feedback
From the TAs' perspective: The training was insufficient for teaching various courses, lack of specialized training, we have not learned effective communication skills with students. From the department heads' perspective: Not passing practicum courses, absence of a "transition period", pushing them directly from the student seat to behind the professor's desk, not participating in mock/trial classes.	3. Lack of a comprehensive system for training, empowerment, and practicum
From the faculty members' perspective: There is no continuous monitoring, minimal monitoring, practically non-existent, lack of an efficient supervisory mechanism, lack of a support system, indirect and arbitrary monitoring.	4. Inadequacy of the monitoring, leadership, and support system
From the TAs' perspective: Low financial motivation, very low remuneration, lack of transparency in wage payment, uncertainty about salary increases, financial problems.	5. Instrumental and economic view, and the inefficiency of the compensation system

From the faculty members' perspective: Instrumental view to fill the class, quantitative and economic view, reducing costs instead of recruitment, meager salary and benefits, disproportion of workload to payment.	
From the TAs' perspective: Lack of effective and scientific communication with professors, lack of a perceptible difference with adjunct professors, difficulty in relating to their own position, lack of an updated organizational chart and syllabi, no communication bridge provided with other professors, the manner and extent of scientific communication with professors is undefined.	6. Structural ambiguity and lack of a codified professional identity
From the students' perspective: Some professors induce stress in people, they give orders at the level of a full professor, they abuse being friendly with the student, they shouldn't discriminate among students, they don't understand us. From the department heads' perspective: The illusion of "knowing", lack of understanding of the professorial position, leniency to gain popularity, illogical strictness to prove oneself, lack of psychological and professional maturity, lack of commitment and irregular attendance.	7. Behavioral, attitudinal, and professional challenges
From the students' perspective: Being inaccessible or having limited time, it's hard to find a suitable time to talk, crowdedness of classes, delay in responding, difficult access, they don't listen to students' words, time is very scarce.	8. Accessibility and time management challenges

Deep Pathological Analysis of the Teaching Assistant Scheme: An Eight-Fold Analysis of Structural and Functional Challenges

The analysis of the data obtained from the interviews indicates that the teaching assistant scheme, despite its initial potentials, has faced fundamental challenges in implementation. These challenges go beyond minor flaws and manifest themselves as a "syndrome of systemic inefficiency" across eight main axes. In the following, these themes are elaborated upon by drawing on the voices of the stakeholders.

The Crisis of Scientific and Professional Competencies: The "Vicious Circle of Education"

The largest and most tangible weakness of the scheme is the deep gap between the assistants' knowledge and the educational needs of the class. Students, as the recipients of the service, criticize this situation with explicit and sometimes harsh language. Phrases such as "many of them have a low academic level" or describing the situation as "awful... they only came to the university and have no literacy at all" indicate the failure of the scheme to gain the trust of the primary audience. This weakness is more deep-rooted from the professors' perspective. They believe that the assistants suffer from a "lack of mastery over specialized content" and are still considered "immature/novices" for managing a university-level class. A department head, pointing to sensitive disciplines such as law and medicine, warns that "the weakness of this scheme is ignoring professional experience"; because the student expects their professor to have "felt the courtroom environment". Faculty members warn that this trend produces a "vicious circle" in which students with weak foundations are trained by instructors who are themselves still learning.

Blind Selection and Lack of an Evaluation System: The “Chaotic Bazaar”

The weakness in competencies is a direct consequence of an inefficient selection process. Department heads liken the current process to a “chaotic bazaar” where selection is based on “guesswork” and “there is no assessment of teaching competence or psychological interview whatsoever”. Professors emphasize that “not every Ph.D. student is necessarily a good teacher” and the void of standard filters is completely felt.

On the other hand, the lack of an evaluation system has caused confusion among the assistants. They state: “We are unaware of our performance status in teaching and do not know if the path we are taking is correct or not.” This systemic ignorance causes errors not to be corrected, but rather repeated.

The Educational and Empowerment Void: “Thrown into the Deep End Without Swimming Lessons”

Perhaps the most tragic part of the story is abandoning the assistants without any preparation. Department heads describe this situation with the interpretation of “pushing them directly from the student seat to behind the professor’s desk”. The teaching assistants themselves admit that “we have not learned effective communication skills with students” and are forced to manage the class using the costly “trial and error” method, which, according to them, “is not to the student’s benefit”. The need to “pass professional practicum courses” and classroom management workshops is the recurring refrain in the statements of all stakeholders.

Lack of Supervision and Communication Disconnect: “Abandonment in the System”

Supervision in the current scheme is largely absent or inefficient. Department heads confess that “our supervision is mostly reactive, not proactive; meaning we wait for a complaint to arrive”. This passive approach causes class quality to not be guaranteed.

Furthermore, assistants complain about the “lack of definition regarding the manner and extent of scientific communication with professors”. They say “there has only been cooperation with the department head and no communication bridge with other professors was provided”. This disconnect turns the assistant, instead of being a “guided mentor”, into a “solitary instructor” who is deprived of the professor’s academic support.

Instrumental View and Economic Dissatisfaction: "Exploitation and the Misfit Patch"

The economic view of the scheme has questioned its educational authenticity. Department heads explicitly consider this scheme an attempt to "sacrifice quality for quantity and financial savings" and believe that assistants play the role of a "misfit patch" to fill the classes that professors do not take on.

The assistants have also perceived this instrumental view and speak of a "feeling of exploitation" and "very meager salary and benefits". This financial and emotional dissatisfaction rapidly suppresses initial motivations and pushes the assistant toward performing minimal duties.

Identity Crisis and Role Ambiguity: "Organizational Purgatory"

Teaching assistants do not have a defined position within the university structure. They complain about "not being officially recognized" and the ambiguity in role boundaries. One assistant says: "Many functional ambiguities stem from the lack of boundaries between the roles of professor, teaching assistant, and student." This "identity purgatory" results in them possessing neither the authority of a professor nor the intimacy of a student, and consequently facing challenges in classroom management.

Behavioral and Psychological Damages: "Danger in the Classroom"

The lack of professional maturity has led to the emergence of behavioral challenges. Students complain that assistants "give orders at the level of a full professor" or "induce stress". But more dangerous are the reports from department heads regarding specific cases; such as an assistant in a psychology class who, through incorrect judgments, caused "irreparable damage" to the students. These cases demonstrate that the "lack of psychological maturity" of the assistants can turn the safe environment of the classroom into a tense and damaging space.

Accessibility and Time Management Challenge: "Imbalance of Roles"

The final weakness is the inability to simultaneously manage the student and professorial roles. Students complain that "finding a suitable time to talk with assistants becomes difficult" and they "have little time to respond". This issue stems from the high workload of the assistants, who are themselves engaged in their Ph.D. studies and do not have sufficient time to fulfill the role of fully supporting undergraduate students.

A review of these eight themes indicates that the teaching assistant scheme in its current state is more of a threat to quality than an educational opportunity. As one department head correctly

pointed out: “This scheme is a double-edged sword... which currently leans more toward sacrificing the student.” The lack of attention to the infrastructures of selection, training, and supervision has turned this scheme into a collection of scattered and detrimental actions.

Synthesis of the Strengths of the Teaching Assistant System from the Perspective of the Four Stakeholder Groups

This table, by integrating the themes extracted from the perspectives of students, teaching assistants, department heads, and faculty members, draws a comprehensive picture of the strengths of the current status of the scheme.

Table 2. Combined analysis of the strengths of the teaching assistant scheme from the perspective of the four stakeholder groups

Basic Themes (Extracted codes segregated by group)	Organizing Themes
Reducing the workload of faculty members (Faculty members), managing large classes and laboratories (Faculty members), compensating for human resource shortages and filling class vacancies (Department heads), alleviating the heavy burden from the shoulders of faculty members (Department heads).	1. Reducing the workload of professors and managing large classes
Gaining experience, personal and academic development, and the best resume (Teaching assistants), consolidating the TA's own learning through teaching (Teaching assistants), creating a groundwork for identifying and nurturing future talents (Department heads), establishing a platform for experience and cadre-building for the future/nurturing the next generation of professors (Faculty members).	2. Creating cadre-building and experience opportunities for TAs
Higher motivation and energy (Students), high motivation, energy, and commitment (putting their heart and soul into it) (Teaching assistants), injecting dynamism and energy into the educational environment (Department heads), injecting new knowledge and dynamism into the educational system (Faculty members).	3. High energy, motivation, and dynamism in classes
Close and empathetic communication based on age and experiential proximity (asking questions more comfortably) (Students), positive and acceptable communication with students (Teaching assistants).	4. Establishing close and empathetic communication with students
Simplifying complex concepts with useful and concise explanations (Students), explaining patiently and aiding better learning (Students).	5. Facilitating learning through the simplification of concepts
Aiding the development of students' instructional skills (in teacher education disciplines) and learning how to articulate concepts (Students).	6. Supportive role in developing other skills of students

Comprehensive Analysis of the Functional Dimensions and Strengths of the “Teaching Assistant” Scheme

Although the teaching assistant scheme faces challenges, an in-depth analysis of field perspectives indicates that this scheme, beyond a simple tool to compensate for staff shortages, possesses vital and positive functions that, if managed correctly, can elevate the university's educational ecosystem. The strengths of this scheme can be elucidated in three intertwined layers: operational

facilitation in university administration, creating dynamism in education, and cadre-building for the future.

First Axis: Operational Facilitation and Crisis Management (Perspective of Administrators and Professors)

The most tangible strength of the scheme is its role as the “safety valve” of the educational system in facing class congestion and faculty member shortages. Under conditions where professors are under a heavy burden of research and teaching duties, teaching assistants play a rescuing role.

Faculty members explicitly acknowledge the necessity of this executive arm. Emphasizing the high volume of work, one of the professors says:

“To tell you the truth, without them, our work would be stalled. The volume of students is high, and a professor alone cannot attend to all the exercises and lab reports. In this regard, their presence is a necessity.”

This view is also confirmed by the department heads. They consider assistants as a tool for system flexibility that enables the management of classes without professors. A physical education department head points to the advantage of the youth and agility of assistants in practical courses, stating:

“In practical physical education courses... teaching assistants, who themselves are young and active athletes, can communicate with students and teach physical movements practically much better than an elderly professor.”

Therefore, at the operational layer, the teaching assistant scheme, by injecting young energy and a flexible workforce, prevents the gridlock of educational processes and allows professors to focus on their primary mission, namely research and leadership.

Second Axis: Educational Dynamism and Empathetic Communication Bridge (Students' Perspective)

The beating heart of this scheme's strengths lies in the quality of “human relations” and the “learning process.” Teaching assistants, due to their proximity in age and experience, bridge the generational gap existing between a full professor and an undergraduate student. This closeness creates a safe and stress-free environment for questioning.

Students view assistants not as higher-ranking authorities, but as “companions.” One student describes this sense of psychological safety as follows:

“They treat us like a friend and buddy... Some professors induce stress in people, and we cannot easily speak our minds [but we are comfortable with assistants].”

Besides the emotional aspect, assistants possess a special skill in “simplifying concepts.” Since they have recently taken these courses themselves, they have not yet suffered from the “curse of knowledge” (forgetting the difficulty of learning fundamental concepts) and know exactly where the student’s mental block lies. A student says in this regard:

“My experience with teaching assistants has generally been positive... These individuals help me a lot in understanding the materials because they have recently passed these materials themselves and know which parts of the lesson can be confusing.”

Furthermore, the high motivation of assistants to prove themselves leads to the injection of energy into the classes. Students believe: “These individuals have higher motivation and energy because they are at the beginning of their careers.” This dynamism and the up-to-dateness of the assistants’ knowledge (who are engaged in new research) take the classes out of a dry and monotonous state.

Third Axis: Strategic Cadre-Building and Professional Development (Perspective of TAs and the System)

From a macro and long-term perspective, this scheme is a “strategic investment” for the future of the university and the assistants themselves. For the assistants, the classroom acts as a professional laboratory where they consolidate their theoretical knowledge.

A teaching assistant recounts their experience, demonstrating the depth of learning while teaching: “It was an excellent period because our own learning was consolidated, and all our knowledge was actualized.”

On the other hand, through this avenue, the university can identify teaching elites in the field of action, not just on paper. Department heads consider this scheme the best filter for recruiting future faculty members:

“It is an excellent training ground for identifying faculty talents. Through this very scheme, we identified two of our best graduates and earmarked them for future recruitment.”

Also, this scheme serves a “role-modeling” function for undergraduate students (especially in teaching and educational sciences disciplines). By observing the assistant’s teaching, they implicitly acquire teaching skills:

“When I work with them, I learn how to express difficult concepts simply and comprehensibly...”

Data analysis shows that the teaching assistant scheme, despite existing criticisms, possesses a “valuable functional core.” The strengths of this scheme lie in the synergy of three key factors:

Support for professors: By lifting the burden of executive tasks and solving exercises.

Support for students: By creating an empathetic communication bridge, reducing stress, and simplifying complex concepts.

Development of human capital: By transforming Ph.D. students into experienced instructors and identifying top talents for the university’s future.

As one of the assistants passionately stated: “Teaching assistants truly put their heart and soul and dedication into the university.” This motivational and human capital, if guided correctly through mentoring and supervision, can transform the teaching assistant scheme from an “executive necessity” into a “competitive advantage” for enhancing the quality of higher education.

Synthesis of the Opportunities of the Teaching Assistant System from the Perspective of the Four Stakeholder Groups

This table, by integrating the themes extracted from the perspectives of students, teaching assistants, department heads, and faculty members, draws a comprehensive picture of the opportunities of the current status of the scheme.

Table 3. Combined analysis of the opportunities of the teaching assistant scheme from the perspective of the four stakeholder groups

Basic Themes (Extracted codes segregated by group)	Organizing Themes
Holding courses on elocution and educational instruction, modern teaching methods, and classroom management (Students), demand for AI training, up-to-date specialized knowledge, and modern teaching skills (Teaching assistants), the need to hold instructor training courses and professional ethics workshops (Department heads), establishing a mentoring system and defining a professional practicum period (Department heads and faculty members), holding mandatory pre-semester training courses and creating a handbook (Faculty members), holding supervision (clinical supervision) sessions (Faculty members).	1. Establishing a comprehensive system of empowerment, mentoring, and practicum
Formulating a competency-based recruitment process (Students), setting a minimum GPA requirement and reviewing portfolios (Department heads), conducting scientific and specialized interviews (Department heads and faculty members), presenting simulated teaching (Department heads and faculty members), requirement to pass relevant professional exams (like the bar exam) (Department heads), granting more authority to educational departments for selection (Faculty members), conducting psychological interviews (in relevant disciplines) (Faculty members).	2. Reforming and standardizing selection and evaluation processes
Utilizing assistants for exercise solving, laboratory courses, and prerequisites (Department heads and faculty members), classifying assistants into different levels (such as level 1, 2, and 3) (Department heads), using a team-teaching model with an experienced professor (Department heads), delegating courses in a stepped and phased manner (Faculty members), defining a “Lead Assistant” role for coordination (Faculty members).	3. Defining specialized and classified roles and responsibilities
Allocating suitable time and place for interaction (Students), holding regular meetings with more experienced professors for brainstorming (Students), the potential to create an integrated system from training to evaluation (Teaching assistants), formulating clear job descriptions and creating	4. Creating supportive structures and a performance management system

a two-way feedback system (Teaching assistants), being officially recognized and receiving more attention from the university (Teaching assistants).	
Increasing the analytical and research role of assistants (Teaching assistants), forming groups for co-authoring books and articles with the participation of assistants (Teaching assistants), inviting experienced professors for practical research training (Teaching assistants).	5. Possibility of elevating the TA role to a scientific-research collaborator
Using the close relationship to create peer exercise-solving groups (Students), leveraging this relationship for informal troubleshooting sessions and academic advising (Students).	6. Utilizing the potential of peer relationships to facilitate learning

Strategic Analysis of the “Teaching Assistant” Scheme’s Opportunities for Transforming the Educational System

An in-depth analysis of stakeholders’ perspectives demonstrates that the teaching assistant scheme, despite existing challenges, is a rich platform of “transformative opportunities.” These opportunities not only have the potential to resolve current shortcomings but can also turn this scheme into the driving engine of the university’s educational quality. The ensuing analysis categorizes and elaborates on these opportunities across three evolutionary axes: “Standard Foundation,” “Supportive Structuring,” and “Role Enhancement.”

First Axis: Standard Foundation (The Opportunity to Reform Input and Training)

The largest consensus among all groups is the necessity of transitioning from bulk recruitment to qualitative, education-centric recruitment.

A) Establishing a Comprehensive Empowerment and Practicum System:

Students and assistants are extremely thirsty for learning teaching skills. A student explicitly states: “Workshops on teaching methods, classroom management, and communication skills with students would be very helpful.”

For department heads, this opportunity means a paradigm shift from “abandonment” to “nurturing.” Professors suggest that instead of suddenly handing over a class, a tiered system should be implemented: “It must be renamed to ‘educational apprenticeship’... Assigning a class to them independently is a sheer mistake.” Assistants themselves also desire this learning: “Mandating assistants to attend university professors’ classes to learn...”, in order to move away from the “trial and error” method, which “is not to the student’s benefit.”

B) Revolution in the Selection Mechanism:

Another golden opportunity is replacing the current system (which administrators call a “chaotic bazaar” based on “guesswork”) with a scientific screening process. Professors emphasize that “not every Ph.D. student is necessarily a good teacher” and suggest the selection process include a

“specialized interview and even presenting a sample teaching.” This shift in approach will open a gateway for the entry of genuine teaching elites into the university.

Second Axis: Supportive Structuring (The Opportunity to Optimize the Process)

After reforming the input, unparalleled opportunities exist to improve the quality of the assistants’ professional life during their service period.

C) Specialization and Classification of Roles:

Instead of a one-size-fits-all prescription, diverse models can be utilized. The proposal of “establishing a mentoring system where each assistant works under the supervision of an experienced professor” is an opportunity for intergenerational knowledge transfer. Also, the idea of “selecting a lead-assistant from among the more experienced students” for large courses is a creative solution for managing crowded classes, as mentioned by the professors.

D) Establishing a Feedback and Support System:

Assistants complain about being “unaware of their own performance” and that they “do not know if the path we are taking is correct or not.” This is an opportunity to create a 360-degree feedback system. Professors emphasize that “supervision should not be fault-finding, but rather geared towards the assistant’s growth.” Creating regular communication channels takes the assistant out of professional isolation and transforms the feeling of “exploitation” into a sense of organizational belonging.

Third Axis: Role Enhancement and Synergy (The Opportunity to Create Value Added)

This axis includes opportunities that elevate the scheme beyond a purely educational tool and create new values.

E) Utilizing the “Peer Relationship” for Deep Learning:

The communication strength of the assistants is a massive educational opportunity. Students say: “They treat us like a friend and buddy... and know which parts of the lesson can be confusing.” The university can formalize this informal relationship by creating “peer tutoring groups.” This facilitates learning and reduces the stress caused by “giving orders at the level of a full professor.”

F) Elevation to Scientific-Research Collaborator:

Assistants have the potential to participate in knowledge production beyond teaching. The proposal of “forming active groups... with the aim of authoring books, articles, etc.” by the assistants indicates their readiness for a more serious role-playing. Professors also believe this scheme is an

opportunity for “an assistant to introduce a new software library used in their research to the students,” thereby linking classical knowledge with the frontiers of science.

Consolidating these opportunities shows that the teaching assistant scheme is at a critical juncture. If the university seizes the opportunity of “Standard Foundation” (proper selection and training), then paves the way with “Supportive Structuring” (supervision and mentoring), and finally adds depth to it through “Role Enhancement” (research and peer learning), this scheme will transform from a potential threat to quality into a dynamic cadre-building ecosystem.

As one assistant beautifully articulated: “It was an excellent period because all our knowledge was actualized.” Realizing these opportunities guarantees that this “excellent” experience will not be an exception, but the governing rule of the teaching assistant scheme.

Synthesis of the Threats of the Teaching Assistant System from the Perspective of the Four Stakeholder Groups

This table, by integrating the extracted themes from the perspectives of students, teaching assistants, department heads, and faculty members, depicts a comprehensive picture of the risks and negative consequences of continuing the current state of the scheme.

Table 4. Combined analysis of the threats of the teaching assistant scheme from the perspective of the four stakeholder groups

Basic Themes (Mentioning the extracting group)	Organizing Themes
Using unqualified individuals can seriously damage the university’s academic reputation (Students), the position of the professor is weakened by lack of experience and trial and error (Teaching assistants), decline in educational quality (Teaching assistants and department heads), it was a disaster, sacrificing educational quality for quantity and financial savings (Department heads), it is not to the student’s benefit (Department heads), undermining the university’s reputation (Department heads), the quality is lower than the former adjunct teaching (Faculty members), a serious threat to the quality of higher education (Faculty members), training a generation of graduates with weak academic foundations, a vicious circle (Faculty members).	1. Erosion of educational quality and damage to the university’s reputation
Some professors induce stress in people and do not understand us (Students), ethical and professional risks (in the absence of supervision, an intimate atmosphere may lead to unprofessional relationships) (Students), legal and professional responsibility for incorrect instruction (Department heads), irreparable harm to the student (Department heads), a serious threat to the mental health of students (especially in psychology) (Department heads), the risk of physical injury to students (in physical education) (Department heads), promoting an unprofessional attitude in the classroom (Department heads).	2. Emergence of professional, psychological, and legal harms to students
Negative experiences make students cynical and discouraged towards the entire educational system (Students), feeling of exploitation and discouragement (Teaching assistants), lack of a clear future for recruitment (Teaching assistants), not being officially recognized by decision-makers (Teaching assistants), a raw and flawed scheme and an insult to the status of a professor (Department heads), weakening the position of the professor (Department heads), creating distrust between the student and the educational system (Faculty members), faculty resistance against the scheme (Faculty members), students referring to us to resolve issues in courses taught by assistants (Faculty members), student dissatisfaction (Faculty members).	3. Discouragement, distrust, and creating resistance among stakeholders
The risk of discouragement and attrition of motivated personnel (erosion of human capital) (Teaching assistants), waste of resources: paying for individuals who lack the necessary effectiveness (Students).	4. Erosion and waste of human and financial capital

Dissecting a Crisis: Detailed Analysis of the Strategic Threats of the Teaching Assistant Scheme

An in-depth analysis of the current ecosystem of the teaching assistant scheme indicates that this scheme has transcended an “executive challenge” and turned into a “systemic risk.” The unprecedented unanimity among the four stakeholder groups (students, assistants, department heads, and professors) regarding the threats is a serious alarm for the university’s reputation and future. These threats can be elucidated in four intertwined layers:

The Freefall of Educational Quality and the Formation of a “Vicious Circle”

The most fundamental threat is the sacrifice of educational quality at the altar of quantity and financial savings. Instead of strengthening the academic foundation, this scheme is undermining the university’s brand. Department heads candidly liken the current selection status to a “chaotic bazaar” based on “guesswork,” calling its outcome “sacrificing quality for quantity” and even a “disaster.”

This plummeting quality is completely evident in the lived experience of students; where they bitterly recall the classes: “They are awful... they just come to the university and have no academic literacy.” This lack of academic competency has caused students to perceive the assistants as lacking mastery over the subject matter. Faculty members also view this phenomenon beyond a weak class, treating it as a “vicious circle”; a circle in which education is entrusted to inexperienced individuals who are still learning themselves, leading to the training of a generation with “weak academic foundations.” Even the assistants themselves acknowledge with professional honesty that: “The position of the professor is weakened by trial and error,” and this method of learning is ultimately not to the student’s benefit.

Playing with Mental Health and Legal Risks (Beyond Education)

The second threat is crossing educational boundaries and entering the realm of “human and professional harms.” In sensitive disciplines, the lack of supervision and training has turned the classroom into a high-risk environment. Psychology department heads speak with deep concern about the bitter experience of an assistant’s presence who, in a psychopathology class, caused “irreparable harm” to the students’ psyche through incorrect judgments. In law and medicine disciplines as well, ignoring “professional experience” (like experiencing the courtroom environment) has created a dangerous vacuum.

On the other hand, students complain about psychological pressures and unprofessional behaviors: “Some professors [assistants] induce stress in people and we cannot easily speak our minds.” Also, the complaint that assistants “give orders at the level of a full professor” indicates a lack of professional maturity that can confront the university with serious legal and disciplinary challenges.

The Collapse of Social Capital: Distrust and the Feeling of Exploitation

The third side of this crisis is the destruction of trust and motivation within the university’s body. Teaching assistants, who should be the driving engine of the scheme, see themselves as victims of a system that has not outlined a future for them. They speak of a “feeling of exploitation” and “not being recognized” by central decision-makers. When an assistant says: “We are unaware of our own performance status and do not know if the path we are taking is correct or not,” it means the feedback system is paralyzed.

This distrust has also spread to faculty members; those who consider the raw implementation of this scheme an “insult to the status of a professor” and believe that Ph.D. students are still “raw” for managing a class at the university level. The result of this situation is the creation of organizational resistance and an increase in the professors’ workload, because, as they put it: “Students frequently refer to us to resolve issues in courses taught by assistants.”

The Illusion of Savings: Waste of Resources and Erosion of Talents

Ultimately, a scheme that began with the goal of efficiency has turned into a factor for the “waste of resources.” Department heads confess that in the current situation, assistants play the role of a “misfit patch” used merely for “filling the vacancies of classes that faculty members do not take.” This instrumental view leads to the attrition of elites. Professors emphasize that the “very meager salary” kills the assistants’ motivation. In fact, the university is spending its budget on a scheme whose output is student dissatisfaction, professor burnout, and assistant discouragement; an equation in which all parties are losers.

Consolidating these threats demonstrates that continuing the status quo is gambling with the university’s years of reputation. When students speak bluntly of “illiteracy” and administrators describe the scheme as a “double-edged sword that is leaning toward sacrificing the student,” the message is clear: halting the quantitative approach and immediately initiating structural reforms

(rigorous selection and mandatory training) is no longer a choice, but a condition for the survival of educational quality.

Does the Proposed Teaching Assistant Model Have the Necessary Validity According to Experts?

To conduct a three-round Delphi analysis, an expert panel consisting of 12 professors and department heads from the Islamic Azad University was formed. For quantitative validation, two indices were utilized: the Content Validity Ratio (CVR) and the Content Validity Index (CVI).

Delphi Statistical Analysis Report: Policies and Strategies for Transformation Section

In the third round, the results of the second round along with the mean of the group's opinions were fed back to the panel. Members were asked to state their final opinion on the challenging item (number 8) and to finalize the other items.

Table 5. Results of the third evaluation round of the teaching assistant scheme's pathology

Row	Final Item	Number of Agrees	CVR	CVI	Final Result
1	Weakness in academic and instructional competencies	12	1	1	Confirmed
2	Lack of a selection and evaluation system	12	1	1	Confirmed
3	Lack of a training and empowerment system	12	1	1	Confirmed
4	Inadequate supervision and mentoring	11	0.83	0.92	Confirmed
5	Instrumental view and financial inefficiency	12	1	1	Confirmed
6	Structural ambiguity and lack of identity	11	0.83	0.92	Confirmed
7	Weakness in adhering to professional ethics principles	11	0.83	0.92	Confirmed
8	Interference of research duties and lack of time	10	0.66	0.83	Confirmed

In the third round, after observing the opinions of others indicating that "interference of duties" causes a decline in educational quality, one more expert changed their opinion, bringing the number of those agreeing with item 8 to 10 individuals. Thus, all 8 items (with the modifications made to items 7 and 8) successfully obtained the necessary validity score.

Based on the findings from three rounds of the Delphi method with the presence of 12 academic experts, the pathology model of the Islamic Azad University's teaching assistant scheme was validated. In the first round, two items (behavioral challenges and time management) were deemed to require revision due to not achieving the CVR quorum (less than 0.560). After modifying the statements in the second round and clarifying the concepts, relative consensus was achieved, and ultimately in the third round, all 8 pathological components were finally approved with a mean CVR of 0.89 and a mean CVI of 0.950. These results indicate that the designed model possesses

high content validity and experts agree on the existence of these challenges in the current status of the teaching assistant scheme. These items can serve as the basis for designing the “desired status” in the continuation of the research.

Delphi Statistical Analysis Report: Policies and Strategies for Transformation Section

In the third round, focus was solely placed on item 999 to determine its status. It was announced to the experts that “blended selection” does not mean eliminating the interview, but rather means an initial filter for an interview invitation.

Table 6. Results of the final third evaluation round of the teaching assistant scheme’s strategies

Row	Final Item	Number of Agrees	CVR	CVI	Final Result
9	Comprehensive academic selection (combination of records and GPA as a prerequisite)	10	0.66	0.83	Confirmed
10	Selection via specialized interview	12	1	1	Confirmed
11	Selection via simulated teaching	10	0.660	0.83	Confirmed
12	Mandatory empowerment courses	12	1	1	Confirmed
13	Mentoring system	11	0.83	0.92	Confirmed
14	Classification of roles	11	0.83	0.92	Confirmed
15	Multi-faceted evaluation system	11	0.83	0.92	Confirmed
16	Evaluation of student satisfaction	12	1	1	Confirmed
17	Performance reward system (targeted tuition discount)	12	1	1	Confirmed

Based on the results of the Delphi process in the transformation strategies section, the items “selection solely based on GPA” and “360-degree evaluation” were rejected in the first round due to a lack of alignment with the university’s executive realities, and then were accepted with structural modifications in the second round. Through the open-ended question at the end of the questionnaire, the important strategy of “performance reward system” was identified and added to the model with the highest possible consensus. At the end of the third round, 9 operational strategies for making the Islamic Azad University’s teaching assistant scheme effective were confirmed with a mean CVR of 0.870.

Delphi Statistical Analysis Report: Outcomes Validation Section

In the third round, the final list comprising 7 desired outcomes was presented to the experts for final confirmation. No particular change occurred in the content, and the goal was to ensure the stability of the opinions.

Table 7. Final consensus results of the teaching assistant scheme's outcomes

Row	Final Item (Desired Status)	Number of Agrees	CVR	CVI	Mean Score (1 to 5)	Result
18	Enhancement of educational quality	12	1	1	4.91	Confirmed
19	Consolidation of university reputation	11	0.83	0.92	4.50	Confirmed
20	Professional cadre-building (nurturing future professors)	12	1	1	4.83	Confirmed
21	Injection of dynamism and innovation into classes	11	0.83	0.92	4.41	Confirmed
22	Effective and empathetic communication with students	12	1	1	4.75	Confirmed
23	Creating attraction for recruiting elites	10	0.660	0.83	4.25	Confirmed
24	Increase in joint research outputs	12	1	1	4.91	Confirmed

Based on the final validation report of the outcomes section, 7 final outcomes were confirmed. The most important achievement of this section was the addition of “research outputs” to the model, which demonstrates that paradigm aids research development beyond mere education.

Discussion

The present study was conducted with the aim of designing and validating the teaching assistant model at the Islamic Azad University. Qualitative and quantitative data analysis showed that the current status of the assistantship scheme faces a “functional paradox”; meaning that despite possessing potential capacities to enrich the learning environment, it has become a threat to educational quality due to structural weaknesses. In the following, the main findings of the research are discussed and analyzed in light of theoretical foundations and empirical background. One of the key findings of the research was the identification of the “lack of pedagogical preparation” and the assistants’ entry into the classroom without training. The results showed that assistants are often employed relying solely on theoretical knowledge and without teaching skills. This finding is in complete alignment with the results of the study by Liston et al. (2009), who stated that few assistants receive formal training and many complain about the inadequacy of their preparation. The direct consequence of this situation is the degradation of educational quality from an “active teaching-learning process” to the “passive transmission of information.”

In addition to the lack of training, the “vacuum of structured supervision” was identified as a critical challenge. The findings indicate that the professor-assistant relationship is mostly limited to delegating the class, and no effective feedback is exchanged. This situation corroborates the findings of Webster et al. (2012) in the DISS project, which showed that about 75 percent of

teachers have received no training for collaborating with assistants and have no opportunity for joint planning. The lack of clinical supervision, according to Da Fonte and Capizzi (2015), leads to a lack of professional development and bias in evaluations. In fact, the findings of this study argue that the “instrumental and economic” view of the assistant (merely to fill a class) has led to the emergence of the “faulty substitution” phenomenon; where the assistant, without the necessary competency, unintentionally plays the role of the main teacher, and this issue, according to the warning by Webster et al. (2010), is the main cause of students’ academic underachievement.

Countering the challenges, analyses showed that the “social and cognitive proximity” of assistants with students is considered a strategic asset. Due to smaller age and academic gaps, assistants are capable of creating an empathetic atmosphere and facilitating learning barriers. This finding is consistent with Loras (2020) research, which considers academic proximity a catalyst for learning. Also, the importance of “individual competencies” such as motivation and communication, which were highlighted in this research, matches the results of Igrik et al. (2021).

However, the results showed that the current structure of the university has failed to exploit this potential. Referring to the “positioning theory” proposed by Funk (2023), assistants have the potential to play diverse roles such as “co-learner,” “facilitator,” and “co-creator,” but in practice, they are confined to the limited role of “informer.” The proposed model of this research, by emphasizing the transition to a “team learning” model (professor-assistant-student), in alignment with the perspective of Keystone et al. (2016), seeks to activate these dormant capacities.

This study demonstrated that the continuation of the current state of the assistantship scheme, due to the predominance of a quantitative approach, confronts the university with the risk of “quality erosion.” Conversely, establishing the proposed model, which is a combination of “standardization of recruitment,” “mandatory training,” and “clinical supervision,” can transform this threat into a sustainable competitive advantage. This model, by creating a cycle of professional maturity, not only resolves current legal and educational challenges but also, by aligning with the findings of international researchers (Odden et al., 2023; Funk, 2023), provides a foundation for training the future generation of faculty members and realizing an entrepreneurial and community-centric university.

Focusing the qualitative study on the Sanandaj branch can pose challenges for the complete generalization of the proposed model to the diverse contexts of other branches, and the lack of

access to senior managers of the central organization has limited the depth of macro-policy analyses compared to executive pathologies. Furthermore, the hierarchical nature and the assistants' financial dependence on the system raise the possibility of some form of self-censorship or conservatism in expressing challenges and threats in the collected data, and the fluidity of university regulations has also made the validity of the results dependent on the current time period, factors that remind the necessity of caution in interpretation and continuous updating of the model in the future.

Based on the final model confirmed by the experts, practical and executive recommendations have been formulated at three levels: macro (policy-making), meso (executive), and micro (operational). The central organization must change the recruitment model from a "quantitative call" to "talent acquisition" by revising the regulations. This includes applying rigorous entry filters (GPA requirement, comprehensive exam, and recommendation letters), defining a tiered structure (level 1 to 3 assistant) to create a professional growth path, and clarifying the payment system. Also, formulating a "charter of rights and duties of assistants" to eliminate ambiguity in their position and to exit the identity crisis is a vital step for transforming this scheme from a financial saving tool into a strategic cadre-building model.

Educational deputies must play the role of "quality gatekeepers." It is recommended that granting a class be contingent upon passing a mandatory "teaching competency certificate" course (including teaching techniques and professional ethics) to prevent the entry of unskilled individuals into the classroom. Moreover, given the alarming reports regarding behavioral harms, conducting psychological interviews and assessing the emotional maturity of applicants (especially in sensitive disciplines) prior to employment, as well as establishing a 360-degree evaluation system by students, is essential for ensuring the health of the educational environment. At the forefront of implementation, department heads must have full authority to reject or approve assistants through conducting "simulated teaching" sessions to ensure their academic competency. Also, to fill the educational and supervisory vacuum, the "apprenticeship" model should be implemented; such that each assistant works under the supervision of a faculty member, attends their classes (shadowing scheme), and receives corrective feedback. This approach transforms supervision from a reactive and fault-finding state into a proactive and guiding process.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

Funding

The authors did (not) receive support from any organization for the submitted work.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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