

BEYOND WORDS: THE IMPORTANCE OF ACTIVE LISTENING ON TEACHING PERFORMANCE

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Abstract

This study examines the relationship between active listening (AL) by professors and student assessments of teaching performance in higher education. Even though AL is not commonly taught in formal education, it plays a very important role in improving the educational experience. The existing body of theoretical and empirical literature underscores that AL and effective communication can nurture a culture of understanding, create strong academic bonds and contribute to a more supportive learning environment. We use a dataset of annual student evaluations conducted at the Ss. Cyril and Methodius University in Skopje between 2011/12 and 2022/23. From an empirical perspective, we employ a two-step system GMM estimator to account for potential persistence effect and endogeneity problems, such as reverse causality. The main findings indicate that AL significantly improves overall student satisfaction. The other important factors such as clarity of presentations, preparedness, content quality, and the ability to stimulate critical thinking also positively influence student evaluations. In contrast, the gender of the professor, instructional materials, and tenure appear to display no discernible impact.

Key words: active listening; communication; learning experience; student evaluation.

JEL classification: A22; D83; I23.

INTRODUCTION

Educators who engage in active listening (AL) play an indispensable role in enhancing the educational experience and student performance. Although AL is usually not a skill acquired through formal education, it is crucial for educators to cultivate it when communicating with their students. AL holds strong potential to foster a deeper understanding of students' emotions, creating stronger teacher-student bonds and facilitating a sense of acceptance and belonging (e.g., Joshi, 2016). Ultimately, AL empowers students' learning experiences and enhances the impact of the educational environment. When professors practice AL, students feel understood, valued, and respected, leading to improved communication, positive experience, and a supportive learning environment.

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Educators can demonstrate their AL skills by showing conscious effort, genuine interest, and attentiveness to students' thoughts, feelings, perspectives, and needs. They use both nonverbal cues (such as nodding, eye contact, and leaning forward) and verbal cues (such as verbal affirmations, paraphrasing, reflecting feelings, checking assumptions, asking open-ended questions, and maintaining an appropriate tone of voice) (e.g., Spataro and Bloch, 2018). Additionally, they are expected to avoid distractions and refrain from “roadblocks” such as judgments and unsolicited advice.

AL encourages students to participate more in discussions, knowing their contributions are heard, understood, and valued. It fosters an environment of collaboration and understanding, leading to constructive debate and effective communication. Through AL, professors can better understand students' thoughts, perspectives, deeper emotions, needs, challenges, and interests. Such a pro-active approach would allow them to tailor their teaching methods accordingly. Professors who listen more actively can give more personalized and constructive feedback and assist students in recognizing their strengths and areas for improvement. AL helps professors formulate better follow-up questions and facilitate discussions that promote critical thinking and deeper understanding of the course content. When students observe their professors practicing AL, they are more likely to reflect on their own learning and communication styles.

Among the numerous benefits, professors who are active listeners can identify and address misunderstandings or biases more effectively when they actively listen to students' concerns and experiences. Our central research objective is to explore whether professors who are active listeners tend to have higher student evaluation scores. A priori expectations are that practicing genuine (not superficial) AL skills by professors would make students feel that their opinions, problems, and contributions are understood and valued. This sense of respect and recognition should lead to higher levels of student satisfaction from the education. AL by professors is also likely to create a supportive and inclusive classroom atmosphere, which students might appreciate and reflect positively in evaluations.

The paper is structured as follows. The second section provides an in-depth literature review on the importance of AL in general terms, and more specifically, in higher education. The next section outlines the model and empirical strategy to assess the impact of AL on the overall student evaluation of professors, conditional upon set of explanatory variables. The fourth section elaborates the data issues and hypothesized relationship between overall student evaluation and a set of conditioning factors. The estimation results are interpreted and discussed in the next section. The key messages and recommendations are conveyed in the concluding section.

1. LITERATURE REVIEW

To streamline the survey of the voluminous literature, we initially review influential studies investigating the concept, origins, and evolution of importance of AL, and then, focus on the role of AL in higher education.

1.1. Active Listening: Concept, Origins, and Evolution

The concept of AL traces its roots to Rogers' (1951) client-centered therapy, highlighting that:

“It is the counselor’s function to assume, ...the internal frame of reference of the client, to perceive the world as the client sees it, to perceive the client himself as he is seen by himself, to lay aside all perceptions from the external frame of reference while doing so, and to communicate something of this empathic understanding to the client.” (Rogers 1951, 29).

The primary aim of this client-centered approach is to genuinely understand the client’s perspective, attitudes, and feelings as the client perceives them, controlling for premature evaluations, judgements, guiding, and directives. Rogers (1951, 41) also emphasizes the importance of creating a safe relationship where the client feels understood and accepted, enabling them to open up and explore their feelings.

“Therapists must concentrate on one purpose only; that of providing deep understanding and acceptance of the attitudes consciously held at this moment by the client as he explores step by step into the dangerous areas which he has been denying to consciousness.”

To illustrate the importance of AL, he highlights that 85% of counsellor responses are attempts to convey an understanding of the client’s attitudes and feelings. His students continue to explore and develop the concept in different settings. Gordon and Edwards (1997, 73) emphasize that:

“Active listening involves both hearing the sender’s words and actively feeding back the listener’s understanding of the meaning of those words. It is a way of listening that has three important functions: 1) it confirms whether the listener has understood the meaning of the sender's message. 2) it conveys empathy for and acceptance of the sender. 3) It encourages and often deepens communication from the sender.”

In a similar frame, Csikszentmihalyi (2008) stresses the difficulty of noticing the environment when attention is focused inward. People who transform stress into an enjoyable challenge spend little time thinking about themselves. Instead, their attention is alert and constantly processing information from their surroundings, allowing them to notice and adapt to external events even if they are not directly relevant to their goals. Speaking about the importance of three kinds of focus (inner, other, and outer), Goleman (2013, 4) points out that “a leader tuned out of his internal world will be rudderless; one blind to the world of others would be clueless; those indifferent to the larger systems within which they operate will be blindsided.”

Essential prerequisites for AL include putting full focus on the other person and possessing a high coefficient of the popular Goleman’s Emotional Intelligence (EI). This involves working on continual development of skills and applying competence in the four domains of EI: self-awareness, self-management, social awareness (especially empathy), and

relationship management (Goleman 2005). Applying Roger's empathic understanding and Goleman's Empathy Triad (Cognitive Empathy, Emotional Empathy, and Empathic Concern) can contribute to a successful teaching performance.

Empathy requires focusing on others, countering our natural inclination towards self-focus. According to Freud's theory of the ego, our ego's dominance can lead to self-centred behavior (Freud, 1923). This is also related to Maslow's Hierarchy of Needs, which emphasizes the progression from basic psychological needs to self-actualization. Teachers, by fulfilling their own needs for competence and esteem, might recklessly focus more on their performance than on students' needs (Maslow 1943).

Battilana and Casciaro (2021) point out that embracing power while avoiding its pitfalls rests on two foundations: awareness of interdependence, which counters self-focus with empathy, and awareness of impermanence, which fights hubris with humility. They conclude that empathy and humility make it easier to let go of selfish goals and pursue altruistic ones – 'the key to virtuous use of power.'

The traditional teaching method "sage on the stage" and other authoritative approaches can lead to hubris and self-focus, preventing teachers from understanding their students' needs and feelings. By being empathic and applying active listening techniques, while practicing humility and applying a student-centred approach, teachers can create relationships based on mutual trust that support the learning environment (e.g., HGSE, 2017). Gordon and Burch (2010, p. 88) underscore that teachers should avoid certain 'roadblocks' to enable students to open up and participate actively. These include: ordering, commanding, directing; warning and threatening; moralizing, preaching, giving "shoulds" and "oughts"; advising, offering solutions or suggestions; teaching, lecturing, using logic, giving facts; judging, criticizing, disagreeing, blaming; name-calling, stereotyping, ridiculing; interpreting, analyzing, diagnosing; praising, agreeing, giving positive evaluations; reassuring, sympathizing, consoling, supporting; questioning, probing, interrogating, cross-examining; withdrawing, distracting, being sarcastic, humouring, diverting.

Wheeler (2013) criticizes superficial AL techniques and emphasizes the importance of giving full attention to what others are expressing, both substantively and emotionally. This involves taking in the meaning of words, tone of voice, facial expressions, and posture.

Purdy (1991) asserts that listening is a primary skill for life success. Kluger and Mizrahi (2023) define effective listening as the degree of devotion to co-exploring the Other with and for the other. Stubbe (2013) conceptualizes it as a collaborative endeavour requiring participants to engage actively as both speakers and listeners. Miller (2018) emphasizes that accurate empathy clarifies communication and strengthens relationships, helpful in various contexts such as parenting, education, friendship, and business. Joshi (2016) elaborates the importance of AL in the classroom for connecting with students and engaging them in participatory learning. It promotes understanding and sends the message to students that they are important, improving communication and behaviour in the classroom.

AL is widely used in negotiations and conflict management to focus and understand perspectives and emotions, leading to better outcomes and resolving disputes (e.g., The Black Swan Group, 2021). Wheeler (2013) criticizes "active listening" techniques from human relations seminars as superficial and often patronizing. He notes that improvising starts with "paying heed" and fully engaging with others' expressions.

The concept of AL can be supported by practitioners, such as Cris Voss' concept of tactical empathy (MasterClass, 2024). It involves understanding the feelings and mindset of another to increase influence and achieve trust-based influence in negotiations. Voss highlights a set of nine core skills for executing tactical empathy, which can be integrated into the classroom to create more empathetic and effective communication.

Studies by Noesner and Webster (1997) and Hargie (2017) emphasize the importance of AL in crisis negotiation and effective interpersonal communication. Imhof (2001) and Imhof, Andrieu, and Goldschmidt (2018) explore techniques to improve listening skills through self-monitoring and provide tools for assessing AL behaviours.

Weger et al. (2014a; 2014b) investigate the effectiveness of AL in initial interactions, showing that it leads to higher conversational satisfaction and social attractiveness perceptions. Yeomans et al. (2019) find that asking follow-up questions significantly enhances interpersonal interactions.

Solomon et al. (2021) do propose a comprehensive framework for understanding interpersonal communication as a dynamic process, emphasizing the importance of examining communication within dyads over time. Yip and Fisher (2022) highlight the role of listening in organizational settings, proposing a research agenda to further explore listening mechanisms and outcomes in organizations.

1.2. Active Listening in Higher Education

Active listening (AL) is an essential skill in higher education, significantly influencing student outcomes, engagement, and teaching effectiveness. This review synthesizes key studies that explore the impact of AL on various aspects of the educational experience, highlighting its importance in fostering positive teacher-student relationships, enhancing student engagement, and integrating effective teaching practices.

The Role of Teacher-Student Relationships. Wubbels et al. (2013) highlight the crucial impact of teacher-student relationships on classroom management and student outcomes. Mutual respect, trust, and clear communication between teachers and students are essential for creating a conducive learning environment. Effective teacher-student relationships lead to reduced behavioural issues and increased student engagement and achievement. Complementing Wubbels et al., Gordon and Burch (2010) emphasize the importance of teachers establishing specific types of relationships with students through active listening. This approach helps students open up, address deeper problems, and find their own solutions, significantly contributing to teaching effectiveness.

Enhancing Student Engagement and Belonging. Freeman, Anderman, and Jensen (2014) reveal that a strong sense of belonging among college freshmen is crucial at both the classroom and campus levels. Students' sense of belonging is positively correlated with academic self-efficacy, intrinsic motivation, and perceived task value. These findings underscore the importance of fostering a supportive and inclusive environment to enhance student engagement and success in higher education.

Techniques and Practices of Active Listening. Margolis (2017) emphasizes specific techniques such as using eye contact, follow-up questions, and summarizing during student interactions. Careful listening builds trust and encourages active participation in discussions

and contributes significantly to the learning process. Bodie et al. (2015) produce an experimental study on the AL paradigm in supportive conversations. They highlight that trained active listeners who use techniques like asking open-ended questions, paraphrasing, reflecting feelings, and maintaining nonverbal proximity are perceived to show more emotional awareness and foster greater emotional improvement. These findings enhance the understanding of the specific roles of AL techniques in informal conversations about personal problems.

Integrating Active Listening in Management Education. Spataro and Bloch (2018) explore the importance of AL in management and its role in enhancing communication and leadership skills. The study outlines educational techniques for teaching AL to management students, emphasizing experiential learning and reflective practices. Structured AL exercises can improve students' ability to engage effectively in conversations, fostering better understanding and collaboration in professional settings.

Data-Driven Approaches to Teaching Effectiveness. Van Nuland et al. (2019) investigate how machine learning can predict student evaluations of teaching effectiveness (SETs). By analysing a vast dataset from student evaluations, the researchers explore the factors that significantly influence SETs. Both instructor behaviours and course characteristics play crucial roles in shaping student perceptions of teaching effectiveness. They suggest that data-driven approaches can help educators and institutions enhance teaching quality and student satisfaction.

2. MODEL AND EMPIRICAL STRATEGY

We contribute to the empirical literature on AL and its impact on student evaluations of teaching by designing a dynamic panel data model. The overall student satisfaction rating for each educator given by students serves as our dependent variable. To account for the persistence in overall student satisfaction, the lagged value of the overall rating is also included as one of the explanatory variables. This approach helps to understand how past satisfaction and educator's reputation influences current ratings, providing insights into the temporal dynamics of student evaluations.

The model incorporates several explanatory variables hypothesized to affect the overall satisfaction rating. The main variable of interest is the student assessment of AL skills demonstrated by the professor (*active*). It is an average score of six questions outlined in Annex 1. The other explanatory variables are: gender of the professor (*gender*), to examine potential differences in satisfaction based on the instructor's gender; clarity of communication (*clarity*), to assess how clearly the instructor conveys the material; preparedness of the educator (*prepare*), to capture how well-prepared the instructor is for classes; content quality and content relevance (*content*), to evaluate the relevance and quality of the course material; critical thinking (*critical*), to measure the extent to which the educator encourages critical thinking among students; instructional quality (*instruction*), to capture the quality of instructional materials (textbooks, compendium, etc.); and experience of the educator (*experience*), to account for the years of teaching experience. By incorporating these variables, the model seeks to comprehensively evaluate the factors that contribute to student satisfaction in an educational setting.

Our main research question is whether professors being better active listeners tend to receive higher ratings during annual student evaluations. The baseline empirical specification takes the following form:

$$se_{i,t} = \alpha_0 + \alpha_1 se_{i,t-1} + \beta_1 al_{i,t} + X_{i,t} \Gamma + \vartheta_{i,t} \quad (1)$$

where $se_{i,t}$ stands for the student evaluation of the overall performance by the professor, $i = 1, 2, \dots, 111$; $t = 1, 2, \dots, 12$; $al_{i,t}$ is our measure of active listening skills; $X_{i,t}$ include individual-specific and time-varying control variables and Γ is a vector of unknown parameters related to the other control variables. We also include year-fixed effects to control for any similar trends in student evaluation of the overall performance by the professor correlated with our independent variable of interest (AL), and individual-fixed effects to control for time-invariant variables that are individual-specific. Thus, we specify the error term as follows:

$$\vartheta_{i,t} = \delta_i + \theta_t + \varepsilon_{i,t} \quad (2)$$

where $\varepsilon_{i,t}$ represents the error term. Standard errors are robust and clustered at the individual level to account for the presence of autocorrelation in the error term within cross-sectional units.

In empirical terms, the sample properties ($N=111$; $T=12$) favour the use of the system Generalized Method of Moments (GMM) estimation. It creates a system of two equations for each time period: the first equation follows the Arellano and Bond (1991) model in differences, where differences are instrumented by levels, and the second equation uses the original levels instrumented with differences (Roodman, 2006). One of the key innovations of the system GMM is that it overcomes the main problem of difference GMM, which assumes that past levels of the variable are good instruments for first differences. Specifically, for variables that are close to a random walk, past changes may predict current levels better than past levels predict current changes. The system GMM uses more moment conditions, as the explanatory variables in first differences are instrumented with lags of their own levels, and the explanatory variables in levels are instrumented with lags of their own first differences. In panel datasets with a short time dimension and persistent time series, the Blundell and Bond (1998) version of the system GMM provides “dramatic efficiency gains compared to the basic first-difference GMM” (Baltagi, 2021, p. 148). Therefore, when the number of time periods available is small, the first-differenced GMM estimator may suffer from a significant downward finite-sample bias (Blundell and Bond, 1998). For these reasons, the system GMM is our preferred estimation technique.

3. DATA

As a case study, we consider a sample of annual student evaluations conducted by an evaluation committee at the Ss. Cyril and Methodius University in Skopje, N. Macedonia. The relevant period under consideration is 2011-2022 ($T=12$), which encompasses student assessments for 111 professors ($N=111$). Due to retirements of some professors and later entry into professorship during the period under investigation, the sample effectively consists of 1,209 observations. The anonymous student evaluations are always conducted in the last week of the academic year, just before the exam sessions. This self-evaluation approach rests on the premise that grading should not affect student evaluations of their professors.

The dependent variable in our study pertains to the comprehensive student evaluation of the professor, utilizing a Likert scale ranging from 1 to 5. In this scale, a rating of 1 denotes substandard performance, while a rating of 5 refers to exemplary performance. The set of explanatory variables are the years of teaching experience of the professor; the gender of the professor; clarity and organization of the lectures; preparedness of the professor for the classes; content relevance of the lectures; professors' ability to stimulate critical thinking; professor's ability for active listening; and the quality of instructional materials.

Most variables are expected to display a positive relationship with the overall student assessment of the professors (Table 1). An important exception is the dummy variable for 2020. The pandemic year forced a sudden shift to online teaching methods and very limited teacher-student interactions. Apart from the econometric justification, the inclusion of the lagged dependent variable can be conceptualized on the grounds of professor's reputation and "word-of-mouth" effect. Students often share "stories" and form expectations about certain professors, thereby providing a rationale to consider the influence of a professor's teaching history and reputation on their current ratings.

Table 1. List of variables and expected signs

Variable	Description	Expected sign
Lagged dependent variable	Reputation of a professor	+/0
Gender	Male or female	0
Clarity and organization of the lectures	Likert scale [1-5], 1=poor; 5=excellent	+
Preparedness of the professor	Likert scale [1-5], 1=poor; 5=excellent	+
Content relevance and quality	Likert scale [1-5], 1=poor; 5=excellent	+
Stimulation of critical thinking	Likert scale [1-5], 1=poor; 5=excellent	+
Active listening	Likert scale [1-5], 1=poor; 5=excellent	+
Quality of instruction materials	Likert scale [1-5], 1=poor; 5=excellent	+
Experience	Years of teaching experience	+/0
Dummy year for 2020	The impact of pandemic	-

Normalizing the data between 0 and 1 can help in interpreting the coefficients more easily if the variables are on different scales. However, since Likert scale data is already bounded within a specific range [1-5], normalization is not essential. The correlation matrix presented in Table 2 does not indicate significant multicollinearity problems.

Table 2. Correlation matrix

	Overall	Gender	Clarity	Prepared	Content	Critical	Active	Instruction	Experience
Overall	1								
Gender	0.111	1							
Clarity	0.574	0.11	1						

Prepared	0.514	-0.002	0.193	1					
Content	0.644	0.13	0.28	0.469	1				
Critical	0.621	0.135	0.278	0.394	0.684	1			
Active	0.476	0.101	0.147	0.348	0.608	0.679	1		
Instruction	0.448	0.14	0.208	0.317	0.338	0.315	0.319	1	
Experience	-0.054	-0.125	0.057	-0.051	-0.034	0.002	0.073	0.043	1

The *overall* student evaluation of a professor demonstrates the highest positive correlation with *content* (0.644), indicating that students' overall satisfaction is strongly influenced by the quality of the content relevance. *Clarity* (clarity of presentations) (0.574) and *critical* (ability to stimulate critical thinking) (0.621) also reveal strong positive correlations with the *overall* student assessment, suggesting that clear and critical teaching styles significantly impact overall satisfaction. *Prepared* (preparedness for the lectures) (0.514) and *active* (student assessment of active listening skills of the professors) (0.476) have moderate positive correlations with the *overall* assessment, indicating these factors are also important. Gender has a low positive correlation with most factors, such as *overall* (0.111), *clarity* (0.110), *content* (0.130), and *instruction* (the quality of instruction materials) (0.140), indicating that gender does not play a major role in influencing these aspects. *Experience* (number of years of teaching experience) exhibits minimal influence on the teaching quality indicators.

4. ESTIMATION RESULTS

The results presented in Table 3 are based on System GMM estimators, reflecting our rigorous approach to addressing potential biases and ensuring the robustness of our findings. The first column of the results denotes the baseline specification, whereas the second column presents the results from the empirical specification in which active listening is modelled as an endogenous variable. In this manner, we address the potential endogeneity (reverse causality) between perceived AL skills and overall student assessments.

Given the limited guidance from econometrics literature on restricting the number of instruments, Roodman's (2006, pp. 22-23 and 38) *>collapse<* option is used. This method creates one instrument for each variable and lag distance, rather than one for each time period, variable, and lag distance. In small samples, reducing the number of instruments can increase statistical efficiency, as too many instruments tend to overfit the instrumented variables and bias the results toward those of OLS/GLS. Moreover, an excess of instruments reduces the effectiveness of the test for the joint validity of the instruments.

The model diagnostics support the validity of the instruments used and the reliability of the estimates. The Hansen test *p*-value is 0.355, which is above the conventional threshold of 0.05, indicating that the instruments used are valid and not overidentifying the model. The diagnostic *m2* test for the empirical specifications does not reject the null hypothesis of no second-order autocorrelation in the residuals. In contrast, the *m1* test indicates significant negative first-order autocorrelation in the residuals, consistent with the expectation if the

error term (in levels) is white noise. Additionally, an investigation into the statistical significance of a more complex lag structure was conducted. The results revealed a significant and positive relationship with the first lag of the dependent variable, while the second lag was statistically insignificant. The results are reported in Table 3 with Windmeijer (2005) finite-sample correction to the reported standard errors in two-step estimation and implemented by utilizing the specialized econometric package, *Stata 17*.

Table 3. Empirical results from a two-step system GMM estimation

Explanatory variables	[1]	[2]
Lagged dependent variable	0.316*** [4.19]	0.176** [1.96]
Active listening	0.125*** [7.71]	0.150*** [4.83]
Gender of the instructor	-0.045 [-1.47]	-0.01 -0.29
Clarity of presentations and lectures	0.178*** [7.04]	0.175*** [5.72]
Preparedness of the professor	0.086*** [4.33]	0.115*** [4.54]
Content relevance and content quality	0.145*** [8.42]	0.165*** [7.35]
Ability to stimulate critical thinking	0.136*** [5.82]	0.170*** [5.73]
Instruction materials	-0.005 [-0.40]	-0.003 [-0.17]
Years of teaching experience	-0.001 [-1.58]	-0.001 [-0.60]
Dummy variable for 2020	-0.038*** [-4.19]	-0.036*** [-3.93]
Constant	0.122 [0.77]	0.253 [1.15]
Number of observations	1,209	1,209
Number of professors	111	111
Number of instruments	21	32
Arellano-Bond test for AR(1) in first differences	0	0

Arellano-Bond test for AR(2) in first differences	0.283	0.274
Hansen test of validity of instruments (<i>p</i> -value)	0.355	0.319

Notes: [1] z-scores in parentheses. [2] *, ** and *** indicate that the coefficients are significant at the 10, 5, and 1 percent level, respectively. [3] To overcome a problem resulting from using too many instruments (Roodman, 2006), the number of instruments is restricted by using the `>collapse<` option in Stata. [4] The first specification is the basic specification, whereas the second specification treats active listening (AL) as an endogenous variable.

The dynamic specifications reveal the presence of significant persistence effects, as seen by the positive and statistically significant coefficient (at the 1% level) on the first lag of the dependent variable (Table 3). The coefficient on the lagged dependent variable (0.316) suggests that past overall ratings have some positive influence on current overall ratings. It indicates persistence or inertia in the ratings over time, where good past performance tends to lead to better current performance. *Vice versa*, low overall ratings in the past tend to lead to lower ratings in the present. This could be due to the inter-generational word-of-mouth effect or institutional factors that maintain or improve the educational environment over time. In essence, maintaining high standards and quality in teaching and content delivery creates a lasting positive impact on student evaluations.

The coefficient on the main variable of interest – students’ assessment of *active listening* by the professor – is 0.125 and is statistically significant at the 1% level. It reveals that fostering active listening skills significantly enhances overall student satisfaction. Active listening by professors helps students grasp course material more effectively, making the learning experience more impactful and rewarding. The results highlight the importance of creating an interactive and attentive classroom environment where students feel heard and understood, which in turn positively influences their overall evaluations of the course and instructor.

The coefficient for *gender* is not statistically significant, implying that gender does not have a meaningful impact on overall ratings in this context. This suggests that student evaluations of teaching quality and overall satisfaction are not influenced by the gender of the instructor. It underscores the importance of focusing on teaching quality and content rather than demographic factors when assessing educational outcomes. The ephemeral importance of gender is in line with other studies, suggesting that gender differences with regard to teachers’ performance are small (e.g., Arrona-Palacios et al. 2020).

The coefficient for *clarity* of lectures and presentations is 0.178 ($p < 0.000$). This significant positive value indicates that clarity in teaching is a crucial determinant of overall student satisfaction. Clear communication, structured delivery of content, and transparent explanations help students grasp complex concepts more easily, leading to higher satisfaction and higher student evaluations of their professors. The finding emphasizes the need for instructors to focus on being clear and precise in their teaching methods to improve student learning outcomes and satisfaction.

The coefficient on *prepare* (preparedness for the lectures) is positive (0.086) and significant, indicating that being well-prepared positively affects overall ratings. Instructors who are well-prepared are likely to deliver more effective and organized lessons, which students appreciate. The results entirely align with expectations, as a lack of spontaneity in delivering lectures is typically viewed as inappropriate within academic settings.

The coefficient on *content relevance* and *content quality* is 0.145 ($p < 0.000$). This highly significant positive value underscores the critical role of high-quality content in determining overall student satisfaction. Well-structured, relevant, and engaging course material enhances students' learning experiences, making them more likely to rate the course highly. The main implication is that investing time in developing and updating course content is essential for achieving positive student evaluations and educational success.

The coefficient for *critical thinking* is 0.123 ($p < 0.000$). It suggests that encouraging critical thinking and engaging students in analytical discussions positively impacts overall ratings. A critical teaching style, which challenges students to think deeply and question assumptions, fosters a more stimulating and intellectually rewarding learning environment. This finding highlights the value of promoting critical engagement in the classroom to enhance student satisfaction and learning outcomes.

The coefficient for *quality of instructional materials* is -0.020 ($p = 0.191$), but it is not statistically significant, indicating that the quality of instruction, as defined in this model, does not have a significant impact on overall ratings. This somewhat puzzling and counter-intuitive finding could suggest that other factors, such as content quality and teaching methods, play a more pivotal role in shaping student satisfaction. It may also imply that the specific aspects of instructional quality measured in this study are not the primary drivers of student evaluations. In other words, students are not offered several competing instructional materials to contrast and compare.

The coefficient for *experience* is -0.122 ($p = 0.215$). This negative value is not statistically significant, indicating that the length of tenure does not have a meaningful impact on overall ratings. This suggests that the duration of an instructor's employment does not necessarily correlate with student satisfaction. Instead, factors such as teaching effectiveness, content quality, and engagement strategies are more critical in influencing overall ratings. It highlights the need to focus on continuous professional development and teaching excellence regardless of tenure.

The coefficient for the dummy variable for 2020 is -0.038 and is statistically significant at the 1% level. All else being equal, the overall student evaluations of professors were lower in 2020 compared to other years. The negative coefficient indicates a decline in student ratings, attributable to the disruptions caused by the COVID-19 pandemic, which forced a sudden shift to online teaching methods and limited teacher-student interactions. This finding reflects the broader challenges faced in education during the pandemic and similar future crises, which may adversely impact the learning experience and, consequently, student satisfaction and evaluations.

The constant term is 0.122 ($p = 0.550$), which is not statistically significant. This indicates that other factors included in the model explain most of the variance in the overall ratings, and the constant term does not add much explanatory power.

The results show that overall satisfaction is most significantly influenced by active listening, clarity, preparedness, content quality, and a critical teaching approach. Gender, instructional quality, and tenure do not have significant impacts on overall ratings. The high significance of the Wald χ^2 statistic provides evidence in favor of the robustness of the model.

The results are also remarkably consistent, when we model AL as an endogenous explanatory variable. All coefficients retain their sign and are of similar magnitude in column [2] of Table 3, suggesting that they are consistently estimated.

CONCLUSION

Our study focuses on the relationship between active listening (AL) and student evaluations of teaching performance of the professors. We apply a dynamic panel data model to analyse a detailed dataset from the largest and highest ranked Ss. Cyril and Methodius University in Skopje, N. Macedonia. The estimation results provide evidence that professors who practice AL tend to receive higher student evaluation scores. They highlight the need for educators to develop and practice AL skills to create a supportive and engaging learning environment.

One of the possible limitations of this research is that the study relies on self-reported student evaluations, which may easily be subject to subjective biases unrelated to the performance of teaching. The study also focuses on one university, which means that the generalization of results may not be that accurate across other institutional or cultural contexts. Finally, the econometric methods applied in order to address endogeneity issues may still be subject to omitted variables, such as classroom dynamics and external pressures on students and professors.

Important driving forces influencing positive student evaluations include the clarity of presentations, professor's preparedness for the lectures, content relevance and content quality of the course, as well as the students' perceptions on the professor's ability to stimulate critical thinking. These factors are also important contributors to overall student satisfaction, providing evidence that effective teaching practices can foster positive educational experiences. In contrast, the gender of the professor, the quality of instructional materials, and the length of teaching experience do not significantly impact student evaluations, suggesting that students place greater importance on pedagogical skills and content delivery.

Our findings emphasize the importance for educators to focus on developing strong communication skills, particularly genuine AL skills, to create a pleasant atmosphere where students feel heard, valued, and respected. By actively listening to students, professors can better understand their needs, provide more personalized feedback, and encourage critical thinking. The outcome would be enhanced educational experience and increased likelihood of higher student achievements.

The implications of this study are twofold. First, educational institutions should consider integrating AL training into faculty professional development programs to improve teaching effectiveness and student satisfaction. Second, future research could examine the long-term effects of AL on student learning outcomes and its potential benefits across different educational settings. Another possible research avenue is to investigate the role of student's gender. It is also worth pursuing a more nuanced analysis of AL to detect more important subsets of these skills.

In sum, AL appears to be an indispensable aspect of effective teaching that can significantly improve student evaluations and student performance. Educators must prioritize AL skills to create a more engaging, supportive, and successful learning environment that meets the diverse needs of the students.

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Annex 1. Section of the Questionnaire on Assessment of Active Listening Skills

1. Do you feel your professor listens attentively to your questions and concerns during class?
Not at all
To a small extent
To a moderate extent
To a large extent
To a very large extent
2. How often does your professor use eye contact and body language to show they are engaged in what you are saying?
Never
Rarely
Sometimes
Often
Always
3. How effective is your professor at paraphrasing or summarizing your points to ensure they understand you correctly?
Not effective at all
Slightly effective
Moderately effective
Very effective
Extremely effective
4. To what degree does your professor ask follow-up questions to clarify or expand on your comments or questions?
Not at all
To a small degree
To a moderate degree
To a large degree
To a very large degree
5. How well does your professor create an environment where you feel comfortable sharing your thoughts and ideas?
Not well at all
Slightly well
Moderately well
Very well
Extremely well
6. How often does your professor acknowledge and validate your contributions during class discussions?
Never
Rarely
Sometimes
Often
Always