The Effectiveness of Webinars in Promoting Researchers' Research Output in Higher Education Case of EFL Researchers at the University of Batna 2

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Abstract:

This study is a reflection on the inclusion of webinars in higher education as an innovative tool to develop EFL researchers' research profile. The study assumes that there is a positive correlation between researchers' satisfaction in webinars and their personal attributes. After the statistical processing of the data collected, findings suggest that webinars have great potential for increasing researchers' research performance and research productivity. Moreover, the study verifies that researchers' personal attributes, particularly age, gender and academic rank are statistically related to the preference of factors in the favor of webinars in higher education. The implications of the study's findings can inform events' organizers, researchers, teachers and students interested in doing webinars.

Keywords: *Webinars; EFL Researchers; Research Productivity; Personal Attributes.*

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Introduction:

COVID-19 pandemic provides a new way forward for science and scientific research to come up with sustainable tools that respond effectively to future similar global crises and challenges. The closure of educational institutions and universities has had a devastating effect on academic life. Therefore, a new academic episode starts with web conferencing which becomes the widely known online event that contributes a great deal to knowledge dissemination across different domains. Archibald et al., (2019) came to the conclusion that the transition to online mode of education offers students more online learning options that enhance their personal enrichment. Interestingly, UNESCO's report for the International Commission on the Futures of Education (2020) described this new learning experience in terms of educators' learning outcomes arguing that, "the educational response to the COVID-19 crisis has revealed the capacity of educators to draw on their professional knowledge and collaboratively mobilize with a resourcefulness and creativity" (p. 13).

As far as scientific research is concerned, there is a general consensus that online events provide a better virtual experience for researchers to increase their research output. Although the novelty of web conferencing has worn off, research institutions and universities have prioritized the increased accessibility to webinars to rise true science collaboration. In the literature, motivations for the participation in web conferences in general and webinars in particular increase steadily. However, a growing body of literature examines the educational outcomes of webinars without further evidence of their effects on undertaking research.

This paper studies the contribution of webinars to promote researchers' gains in knowledge and skills. Basing on the assumption that webinars have great potential for promoting researchers' academic freedom and scientific autonomy (Chankselian et al., 2020), the present study examines the role of webinars to provide first-hand insight into EFL researchers' research prospects and opportunities.

1. Theory of Web Conferencing:

Academic conferences represent the backbone of scientific research due to its privileged spaces for the dissemination of knowledge. Conferences offer ample opportunities for researchers to browse scientific literature, to investigate their own practices and to compare them with similar academic products.

Web conferencing is a web service for holding live meetings and presentations. In Nedeva's et al., words (2014), "web conferencing is a system to perform live meetings between two or more participants from different locations over the Internet" (p. 1). Laratta and Mekongo (2015) defined web conferencing as "a form of real-time-communication through which users connect over the internet

and use features such as texting, voice over Internet protocol and motion video" (p. 2). The roots of web conferencing were traced back before the emergence of internet and World Wide Web and they were associated with a computer-based education system called PLATO (Programmed Logic for Automated Teaching Operations) that was created in 1960 by Donald L. Bitzer at the University of Illinois at Urbana-Champaign (Woolley, 1994). In the 1970s, the platform was quickly evolved into a communication system used for educational purposes.

The educational use of video conferencing was firstly marked in higher education institutions then later in schools as first insights into distance education to become later "one end of a spectrum of delivery modes" (Lawson et al., 2010). Various video conferencing applications were developed like Microsoft Teams, Skype. Apple's FaceTime and Zoom. Therefore, new forms of interaction between educators and learners were possible (one-one; one-some; some-some).

Algerian university, for instance, adopted distance learning as a new method in education expanded by The National office for Distance Education and Training (Office national d'éducation et de formation à distance) of the Ministry of Higher Education which affords diverse online learning platforms like BeeForm in 2017 and the National Centre for Professional Distance Education (Centre National de la Formation et de l'Enseignement Professionnels à Distance, CNEPD) in 2018 (Zermane & Aitouche, 2020). The Algerian university plays a pivotal role in the innovation of distance education. Teachers succeed to a great extent to upgrade the knowledge, the skills and the qualifications of traditional structured learning. Zermane and Aitouche (2020) argued that "the Higher Education sector in Algeria, …, aims to maintain the academic relationship, between the teachers and their students, and put online teaching content in their different forms of courses, tutorials and practical works" (p. 164).

Web conferencing is uniquely geared toward social constructivism that was popularized by Lev Vygotsky in 1978, and the active learning theory developed by Charles C. Bonwell in 1991. Web conferencing was enhanced by Vygotsky's Zone of Proximal Development which emphasized the importance of dialogue as a tool of negotiating meaning and sharing understandings. Therefore, meaningful web conferencing learning is the perquisite of social presence, teaching presence and cognitive presence.

Incorporating web technologies in higher education has surprising consequences on researchers who "need to undertake informed assessment as to the suitability of on-line platforms for the research and make reasoned choices when using them on a case-by-case basis" (Kritikos, 2019, p. 60). Sophisticated researchers use web conferencing as a tool to mediate data collection. Glassmeyer and Dibbs' (2012) findings on the use of video conference interviews to collect qualitative data in virtual environments indicated general approval among

researchers as to the significance of video conferencing to obtain some hitherto unattainable data. Synthesis of the literature indicates ample advantages to using online platforms to enhance researchers' scientific production. Archibald's et al., (2019) investigation on researchers' perceptions of using Zoom to conduct qualitative interviews was particularly noteworthy due to the platform' pros to enhance its potential research utility. In a similar vein, Sarabipour (2020) considered the importance of online conferences as a way to promote research diversity. She maintained that "presentation of diverse research, viewpoints, discussions and ideas, which will benefit all researchers, since diversity brings excellence to scientific exchanges" (p. 2).

2. Webinars Academic Potentials:

The term 'webinar' was created by Eric R. Kolb in 1998 and it is an assembly of two words, namely, 'web' referring to the World Wide Web, and 'seminar'. Lande (2011) defined webinars as "real-time online meeting events that gather people together at a specific time to listen to, observe, and participate in a presentation" (p. 6).

With the onset of COVID-19 pandemic, webinars become an indispensable tool in higher education that ensures closer contact between different categories including students, educators and researchers. Guanci (2010) listed seven academic advantages of webinars as being (1) affordable; (2) neutral with respect to the location of participants; (3) time zone-proof (4) flexible; (5) recordable; (6) interactive and (7) cost-effective.

In the academic context, webinars are best described by Ryan and Daci's (1985) self-determination theory which posits that human motivation is mediated by three fundamental psychological needs are competence, autonomy and relatedness. Researchers constantly identify intrinsic motivation as a critical factor to promote their research output. Relatedness is one of the social factors researchers often lack. According to Ryan and Daci (2009), relatedness refers to the feeling of belonging reflected through individuals' ability to internalize their values and practices of those to whom they feel. In this regard, webinars are considered as real-time social experiences to increase connectedness among members of the academic community. Gautreau et al., (2020) considered webinars as a vehicle for connectedness and a powerful means for humanizing academic research. For organizers, webinars allow them to promote their online events and to communicate its outcome efficiently by observing the behaviors of people around them (Davis & Luthans, 1980).

Webinars' initiatives have advanced significantly as higher education institutions seek to increase the quality of education and training programs for teachers and to foster their interaction and collaboration with global array colleagues. COVID 19 pandemic makes webinars a popular choice for different

categories of online users in different sectors. José Sá et al., (2019) considered webinars as a dynamic construct identified through time, experience, social influence and appropriation. Individuals who use webinars are active users who succeed to adapt their communication behaviors to the conditions of virtual academic community.

In Algeria, webinars are used as online courses for students or young researchers to speed up the progress of learning through innovative course contents and training programs. Zermane's and Aitouche (2020) investigation of the use of webinars with the students of the department of Industrial Engineering at the university of Batna 2 clearly showed that webinars promote excellence in the institution of industrial engineering; however, their use with final year students remains critical in the absence of collaboration with private industrial sectors to complement public programs in vocational training. Still, for researchers, the authors confirmed that webinars are "an occasion to promote international collaboration further and share experiences, knowledge, and resources to build a global online research network" (Zermane & Aitouche, 2020, p. 168). In this respect, webinars have become a popular avenue for research development. The success of Algerian higher education to rapidly pass from traditional conferencing to web conferencing is a stepping stone to cope with the sudden shift in the academic life of researchers.

3. Research Methodology:

This study is a reflection on the use of webinars to promote EFL researchers' research output. It assumes that the level of experience participating in online webinars is mostly affected by researchers' characteristics and research needs. The evaluation of researchers' webinar experience is important to investigate webinars' factors that motivate or hinder EFL researchers to engage in research productively. The research questions for this study are as follows:

a. How effective are webinars in promoting EFL researchers' research productivity?

b. Do researchers' personal attributes moderate webinars' effectiveness?

c. What are the academic potentials and limitations of webinars?

The study adopts a mixed method research design. Since the size of the target group is relatively large, quantitative research method was a convenient choice for the research. The quantitative part of the study includes statistical analysis of data collected from 150 EFL researcher at the University of Batna 2. The data are processed and analyzed by Statistical Package for the Social Sciences (SPSS), version 22.0, for Windows 7.0. The data were entered twice to be compiled. Besides descriptive statistics, other tests are used particularly Pearson's Chi-Squared test for independence in addition to the Parametric test of Analysis of

Variance (ANOVA) to compare population means. The qualitative part of the study employs a semi-structured interview with two scientific events' organizers in the Faculty of Foreign Languages at the University of Batna 2. Information from the interview will supplement the data obtained from researchers' questionnaire.

As far as questionnaire reliability is concerned, the first table calculates the internal consistency of Cronbach's Alpha. The Reliability statistics table below shows high degree of reliability (α = 0,71) which indicates that the questionnaire is reliable (α ≥0.60).

Table 1
Questionnaire Reliability

Cronbach's Alpha	Cronbach's Alpha based on standardized items
0,71*	37

* α ≥0.60.

3.a. Analysis of Researchers' Questionnaire:

Table 2
Gender Differences

Variables	Frequency	%
Female	74	49,0
Male	76	50,3
Total	150	99,3

The demographic characteristics of the sample of the study provides important information about the gender, the average age, and the level of participants. The output above (table 2) is the resulting frequency table; it tells us that out of a total of 150 respondent, 74 are females and 76 are males. This means that there are no significant differences regarding participants' gender.

Table 3
Researchers' Age

Age	Frequency	%	Valid percent	Cumulative Percent
24-29	70	46,4	46,7	46,7
30-35	38	25,2	25,3	**72,0**
35+	42	27,8	28,0	100,0
Total	150	99,3	100,0	

Concerning the age profile of the respondents, the cumulative percentage indicates that over 70% of the respondents are aged between 24 and 35 (table 3). This category of researchers contributes a great deal to the growth of research work in Algeria. The number of students enrolled in post-graduation which reached 2 000 000 students in 2020, in addition to the high ratios in doctoral programs will

lead to desired results regarding scientific research. For better research opportunities, Algerian Ministry of Higher Education and Scientific Research ensures the organization of seminars, conferences and forums for all researchers that allow high scientific level competencies.

Table 4

Researchers' Academic Rank

Variables	Frequency	%	Valid Percent	Cumulative percent
Magister	31	20,5	20,7	20,7
Doctorate	89	58,9	59,3	**80,0**
Professor	30	19,9	20,0	100,0
Total	150	99,3	100,0	

Table 4 represents researchers' academic rank. Among the three clusters, the cumulative percentage frequency shows that most respondents are Magister and doctorate holders (80%) who are facing increasing expectations about their participation in online conferences or/and webinars in order to develop their profiles; therefore, aligning their professional development.

Table 5

Researchers' Participation in Online Events

Items	Frequency	%
Yes	94	**62,3**
No	56	37,1
Total	150	99,3

As researchers have worked hundreds of in-person conferences, it can be definitely a monumental challenge to get alignment in virtual conferences. Surprisingly, table 5 illustrates that an incredible number of EFL researchers (62,3%) at the University of Batna 2 considered online conferences a major avenue for academic research during COVID-19 pandemic. This brand-new situation imposes a new academic reality which makes researchers more active and productive in online collaborations.

Table 6

ANOVA test for Researchers' Participation in Webinars regarding their Academic Rank

Variables	Mean	Std. Variation	Asymp. Sig	F	Sig.
Magister	1,3226*	,47519	**,050**	3,058	**,050**
Doctorate	1,3258*	,47134			
Professor	**1,5667***	,50401			
Total	1,3733*	,48531			

*The mean difference is significant at the level 0.05.

** p ≤ 0.05.

To attain more accurate data about researchers' participation in webinars, ANOVA test presented in table 6 is used to test the significance between researchers' participation in webinars and their academic rank. Results show that the p value is equal to the significance value ($\alpha \leq 0.05$) which means that the difference among the two groups is deemed statistically significant. In the same table, Pearson's Chi-Squared test confirms that there is a significant association ($\alpha = .050$) between researchers' participation in webinars and their research type.

Table 7
Evaluation of Researchers' Online Experience

Items	Frequency	%
Excellent	30	31,91
Good	39	41,48
Fair	10	10,63
Poor	15	15,95
Total	94	99,9

Figure 1
Evaluation of Researchers' Online Experience
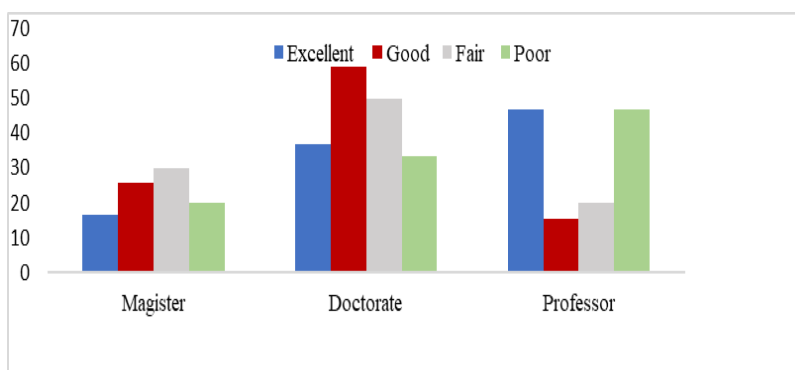
Due to the disruptive effects of the pandemic on research, most researchers (73,39%) expressed general satisfaction with their online experiences (table 7). Figure 1 shows that, researchers live different online experiences according to their academic rank and research demands, for example, doctors need more research participation opportunities for their career development and progress than professors.

Table 8

Reasons for Attending Webinars

Items	Frequency	%
Building professional development	61	40,4
Investigating academic collaboration and networking	33	21,9
Improving presentation skills	34	22,5
Acquiring and upgrading knowledge	22	14,6
Total	150	99,3

Table 8 suggests that the researchers' two main reasons for participating in webinars are building professional development (40,4%) and improving presentation skills (22,5%). The fact that academic participations are among the research activities for habilitation qualifications and the path to a professorship, researchers find webinars the stepping stone that puts their research and professional development much more center stage than ever before.

Table 9

The Nature of webinars

Items	Frequency	%
National	78	51,7
International	72	47,7
Total	150	99,3

The present research agenda opens more opportunities in research both at the national and international levels. Results in table 9 suggest that a big proportion of EFL researchers have participated in national conferences. This confirms the increasing availability of webinars as a new research technology in Algeria. Moreover, researchers' participation in international webinars excludes an important factor that prevents the extension of researchers' scientific participations related to conference location.

Table 10

Webinars and Research Output

Items	N	Mean	Std. Deviation
1. Providing detailed knowledge and valuable information about the latest English Language teaching and learning approaches.	150	2,6333*	1,03895
2. Delivering updated scientific content.	150	**2,7733***	1,01099
3. Showing researchers' existence or academic activities.	150	2,5200*	,98116
4. Verifying and comparing research findings with existing research.	150	2,6867*	,96333
5. Understanding academic and social phenomena in its most complete implications.	150	3,0267*	,96896
6. Reducing the inequalities among researchers.	150	2,4533*	,99385
7. Paving the way for initial pilot studies.	150	**3,0933***	,96479
8. Creating new case studies.	150	**3,4467***	,60796
9. Mediating data collection tools and collecting vivid data.	150	2,5267*	1,00132
10. Assessing the scientific value of the research.	150	3,1133	,80715
Total		**2,8273***	0,93384

*The mean difference is significant at the level $0.025 < p < 0.05$.

Table 10 above reflects descriptive data for the research output items. The mean of most items and the mean of all items (2,8273) are more than the theoretical mean (typically ≥ 2,5). In other words, frequency of the answers (strongly agree) and (agree) is more than (strongly disagree) and (disagree). Moreover, mean analysis suggests that creating new case studies and assessing the scientific value of research are the main contributions of webinars to promote researchers' research output. Also, webinars can be particularly valuable for researchers to tailor their online experience by delivering updated scientific content.

Table 11

ANOVA Test for Researchers' Research Output regarding their Academic Rank

Variables	Mean	Std. Variation	Asymp. Sig	F	Sig.
Magister	2,7387*	0,9040	0,3994	3,501	**,000*****
Doctorate	2,8112*	1,8183			
Professor	2,9756*	1,8102			
Total	2,8418*	1,5108			

*The mean difference is significant at the level 0.05.

**p ≤.005. ***p < 0,01.

The results in table 11 show that the effectiveness of webinars to promote research output is statistically associated with the academic rank of researchers rather than their gender or age. This has been clearly shown through the p value (p <0,00) corresponding to the constant value (p < 0,01). Additionally, comparing mean value for each academic rank clearly indicates that professors are more likely to consider the value of webinars to increase research productivity.

Table 12

Webinars' Limitations

Items	N	Mean	Std. Deviation
1. Poor emotional connection among participants.	150	2,5467*	,99385
2. Poor assessment of evidence and research findings.	150	2,5600*	,94464
3. Difficulty to negotiate between the participants.	150	**2,6267***	,98680
4. Difficulty to feedback over who is being addressed.	150	2,1333*	,91715
5. Lack of reflective thinking.	150	2,5267*	1,05993
6. Lack of networking opportunities.	150	**2,2867***	,96472
7. Limited number of participants.	150	**2,8133***	,97200
8. Significant disruption in the delivery of knowledge.	150	2,6267*	,98680
9. Lack of efficient management of researchers' linguistic performance.	150	1,9533*	,79711
10. Difficulty to assess researchers' interests and experience.	150	2,5067*	1,09144
Total	150	**2,4580***	0,97144

✳The mean difference is significant at the level 0.025<p<0.05.

In table 12, which is related to webinars research limitations, the mean of all items (2,45801) is less than the theoretical mean (typically ≥ 2.5). This means that the frequency of the answers (strongly disagree) and (disagree) is more than (strongly agree) and (agree). Although table 10 suggests that webinars are descriptively effective in promoting researchers' research output, results in table 12 indicate that the main distraction that may impede the flow of webinars is the limited number of participants; meanwhile, some researchers account for the disruption in the delivery of knowledge in addition to the absence of actual negotiation between participants.

Table 13

ANOVA Test for Webinars Limitations regarding Gender

Variables	Mean	Std. Variation	Asymp. Sig	F	Sig.
Female	**2,5189***	0,9466	0,5363	3,668	,**000*****
Male	2,3986*	0,9744			
Total	2,4587*	1,9210			

*The mean difference is significant at the level 0.05.

**p ≤.0.05. ***p < 0,01.

Based on the results presented in table 13, p = 0.00 < 0.05 means that different genders have significant difference in with respect to webinars limitations. Existing research shows that mean test scores for females are higher than those for males. This reveals that females are exhibiting signs of dissatisfaction regarding some webinars' practices more than males. The fact that webinars' time frame is almost always binding, male researchers appear to be much more consistent in attending webinars rather than female-researchers.

Table 14

Webinars' Areas of Improvement

Statements	N	Mean	Std. Deviation
1. Providing researchers' training sessions using webinar technology.	150	**3,5733***	,49625
2. Inviting a large number of potential attendees.	150	3,0267*	,80223
3. Webinars should not be used for overly complex or difficult content but rather to deepen knowledge about a given topic.	150	2,6267*	1,03979
4. Webinars communicate important information and review theories; however, more academic research should be done.	150	3,1067*	,95641
5. Providing resources for additional studies or References.	150	2,9067*	,89252
6. Inviting dispersed researchers to various live webinar events.	150	2,9667*	,72738
7. Strengthening researchers' problem solving and critical thinking skills.	150	2,5200*	1,05372
8. Promoting the implementation of research results.	150	**3,3333***	,76559
9. Increasing researchers' authority on the subject they demonstrate.	150	2,9867*	,81089
Total		**3,0052***	0,8378

*The mean difference is significant at the level $0.025 < p < 0.05$.

Table 14 related to the items of areas of improvement suggests that the mean of each item and the mean of all items (3,0052) are more than the theoretical mean (typically ≥ 2.5). This reveals that the frequency of the answers (strongly agree) and (agree) is more than (strongly disagree) and (disagree). Yet, mean results of the Likert scale question indicate that potential areas of improvement for webinars are conducting training sessions, promoting the implementation of research results and enhancing academic research.

3.b. Analysis of the Interview:

The qualitative part of the study employs a semi-structured interview in order to explore the role of webinars in the acquisition of scientific knowledge. The first interviewee provides an insightful view on the importance of using webinars by researchers in general and EFL researchers in particular. In her words, webinars are "a resurgence within Algerian scientific institutions and universities". Algerian scientific community, as is the custom in the international scientific community, operates on the principle of knowledge dissemination and sharing. This makes webinars high impact method for researchers' pursuit of scientific knowledge. She continued,

For me, webinar technology expands research territory and increases the range of research. Despite its limited access, statistics show that webinars first initiatives are extremely successful comparing with the registered number of researchers and also participations. Webinars allow researchers to monitor research in a critical period and under exceptional circumstances [1].

The second interviewee went further to emphasize the role of webinars to sustain the application of technology for scientific purposes. She stated,

Through researchers' reflections and feedback to webinars' presentations, I recognized that distance does not impede scientific research, the latter which is more related to researchers' social presence…webinars impose a different research protocol to advance knowledge [2]. HG<

Organizers' response to the main factors which govern researchers' participation in webinars is mainly associated with researchers' perspectives and their research interests:

Researchers who consider knowledge dissemination fundamental for the advancement of research are more likely to ascertain their expectations of their online experiences rather than those who consider research a private activity [1].

Web accessibility is another factor that determines researchers' participation in webinars, "insufficient web-knowledge and insufficient internet access are main reasons that limit webinars' future participation" [2]. Both interviewees agree that researchers' gender, age, qualifications and academic rank affect research diversification; otherwise, webinars are affordable for all researchers.

The core research question addresses the role of webinars to promote EFL researchers' research output. According to the first interviewee,

In Algeria, webinars are relatively new for education and/or scientific environment in higher education, so it is still too early to assume that

webinars are effective to promote researchers' research output, yet we cannot even say that the advantages of webinar outweigh its disadvantages [1].

The second interviewee holds an entirely opposite view and she stated,

One can never deny that webinar has become a must-attend event. As an event organizer, I can say that the degree of researchers' participation in webinars far outweighed our expectations. Research output is the productive interaction between research activities. Through webinars, EFL researchers' profile is fully up-to-date with latest research activities" [2].

In order to enhance the use of webinars in the field of research, the first interviewee insists on the importance and the necessity of creating a national platform that can be used by all researchers in different fields. She reported,

It is imperatively required for our faculty to be well versed in the importance of webinars to explore the possibilities for future research collaboration. Therefore, the inclination towards this technology is unavoidable [1].

For the second interviewee, "setting up training sessions for researchers is the best move that would help researchers to do their best science [2].

4. Discussion:

Data analysis and systematic literature review offer a synthesis of the best available evidence regarding the effectiveness of webinars to promote EFL researchers research output in higher education. In the literature, the association between webinars and social-constructivism theory has received more attention. Knowledge construction and scientific practice are regarded as social activities that are tied to the collaborative efforts of the members of the scientific community. This assumption has been confirmed in this study which tends to measure statistically webinars potential to increase EFL researchers' productivity.

Testing the correlation between webinars' attendance and other variables, mainly age, gender and academic rank shows significant relation between webinars and researchers' academic rank. This comes in line with the social constructivism perspective that scientific decisions are related to researchers' values, interests and needs. It is interesting to note that academic rank (magister, doctorate, professor) is the only factor that demonstrates different degrees of participation in webinars. No statistically significant results were found between researchers' age and gender and their participation in webinars ($p > 0.05$). This means that webinars are affordable for researchers of all ages and both genders. The interview findings strengthen the idea that age and gender are indicators of research diversification; meanwhile, webinars are designed for differing populations that vary in terms of age, gender, experience and rank.

As far as research output is concerned, webinars are deemed to be the sponsor of researchers' research projects and findings. Professors of higher rank show significantly less rejection and more acceptance of the role of webinars to increase their research output compared to their colleagues. Mean results show the positive effect of webinars on highly-ranked researchers' research productivity. In effect, given their accumulated experience and reputation, professors tend to be more actively engaged in webinars.

Although age and gender were excluded from previous analyses, ANOVA test reports a statistically significant relation between gender and webinars' limitations. This induces us to recommend caution in the negative potential effects of webinars. Opinions of researchers and events' organizers regarding webinars' limitations turn attention to the main factors that may prevent webinars to assimilate within the scope of higher education in Algeria. Therefore, more longitudinal data are needed in order to determine whether webinars can supplement researchers' lack of in-person conferences.

Finally, the assumption that the level of experience participating in online webinars is mostly affected by researchers' age, gender and academic rank is verified as true. Testing the utility of webinars cannot simply be measured in terms of researchers' experience of attending webinars. The influence of personal attributes is important to analyze the scientific productivity of the researcher expressed as the number of his/ her scientific participations during a given period of time. Overall, evaluating the effectiveness of webinars in promoting researchers' research output is mainly related to researchers' qualifications, their professional development needs as well as webinar's content and structure.

Conclusion:

The use of webinars is becoming increasingly more common, and the proper understanding of its use and limitations is important. Although Covid 19 pandemic has severely impacted the entire higher education sector in Algeria, the shift to online mode of research becomes a major avenue to maintain the provision of scientific activities and to facilitate the delivery of scientific information. The study clearly shows that the use of webinars facilitates the process of collective construction of knowledge and promotes social cohesion between researchers. In the process of research, webinars can be used to further optimize research by investigating new case studies, collecting data from participants and reflecting on research methodologies. Moreover, the interaction with online researchers expands research scope and the way researchers interpret results and form conclusions.

Still, with initial general satisfaction among researchers, the study shows that the ability of researchers to participate in webinars is compromised by other factors including their academic rank which is a significant predictor of research productivity. The academic qualifications of researchers are deemed statistically significant to explain their participation in webinars. Meanwhile, no statistically significant relationship was found between researchers age and their perceptions of webinars.

The debate about the limitations of webinars is still ongoing, the majority of female researchers felt overwhelmed by webinars' practices and regulations. Unlike age, gender has a moderating effect to limiting the adoption of webinars. Although findings show that female researchers have participation levels similar to those of their male peers, their use of webinars poses several disadvantages. While research provides favorable support of webinars and its effectiveness in reaching diverse researchers, further investigation is necessary to determine whether webinar succeed to replace or to complement traditional in-person conferences.

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