



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/165,648	06/30/2008	Lou Gray	086882-8004.US00	2220
25096	7590	05/28/2019	EXAMINER	
PERKINS COIE LLP - SEA General			THAI, XUAN MARIAN	
PATENT-SEA			ART UNIT	
P.O. BOX 1247			PAPER NUMBER	
SEATTLE, WA 98111-1247			3715	
			NOTIFICATION DATE	
			DELIVERY MODE	
			05/28/2019	
			ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentprocurement@perkinscoie.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LOU GRAY, NIGEL J. GREEN, DANIEL R. KERNS,
ROY LEBAN, BECCA LEWIS, BENJAMIN W. SLIVKA, and
MICKELLE WEARY

Appeal 2017-009183
Application 12/165,648¹
Technology Center 3700

Before CYNTHIA L. MURPHY, KENNETH G. SCHOPFER, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–3, 5–10, 22–26, 28, 29, 31–34, and 36. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ The Appellants identify DreamBox Learning, Inc. as the real party in interest. Appeal Br. 2.

ILLUSTRATIVE CLAIM

1. A computer-implemented method, comprising:
 - evaluating, by a computing system, a performance of a plurality of learners taking at least one lesson of a plurality of lessons in a learning curriculum;
 - based upon the evaluation, calculating, by the computing system, an Effectiveness Factor for the at least one lesson indicative of a teaching efficacy for the at least one lesson;
 - associating, by the computing system, the Effectiveness Factor with the at least one lesson;
 - forming, by the computing system, an expectation of a subsequent learner's performance in taking a subsequent lesson;
 - evaluating, by the computing system, an actual performance for the subsequent learner in taking the subsequent lesson;
 - selectively adjusting, by the computing system, the Effectiveness Factor for the at least one lesson based on a performance heuristic applied to the evaluation of the actual performance for the subsequent learner taking the subsequent lesson; and
 - removing from the learning curriculum, by the computing system, the at least one lesson in response to determining that the adjusted Effectiveness Factor is below a threshold.

REJECTION²

Claims 1–3, 5–10, 22–26, 28, 29, 31–34, and 36 are rejected under 35 U.S.C. § 101 as ineligible subject matter.

² The Final Office Action (pages 4–12) also rejects claims 1–3, 5, 6, 8–10, 26, 28, 29, 31–34, and 36 under 35 U.S.C. § 102(b) and claims 7 and 22–25 under 35 U.S.C. § 103(a). The Examiner's Answer (dated April 20, 2017) withdraws these rejections. *See Answer 3, 11–12.*

FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

ANALYSIS

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. Yet, subject matter belonging to any of the statutory categories may, nevertheless, be ineligible for patenting. The Supreme Court has interpreted § 101 to exclude laws of nature, natural phenomena, and abstract ideas, because they are regarded as the basic tools of scientific and technological work, such that including them within the domain of patent protection would risk inhibiting future innovation premised upon them. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013).

Of course, “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply’” these basic tools of scientific and technological work. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014) (internal citation omitted). Accordingly, evaluating ineligible subject matter, under these judicial exclusions, involves a two-step framework for “distinguish[ing] between patents that claim the buildin[g] block[s] of human ingenuity and those that integrate the building blocks into something more, thereby transform[ing] them into a patent-eligible invention.” *Id.* (internal quotation marks and citation omitted). The first step determines whether the claim is directed to judicially excluded subject matter (such as a so-called “abstract idea”); the second step determines whether there are any “additional elements” recited in the claim that (either individually or as an “ordered

combination”) amount to “significantly more” than the identified judicially excepted subject matter itself. *Id.* at 217–18.

The USPTO recently published revised guidance on the application of § 101, in accordance with judicial precedent. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 52 (Jan. 7, 2019) (“*2019 Revised Guidance*”). Under the *2019 Revised Guidance*, a claim is “directed to” an abstract idea, only if the claim recites any of (1) mathematical concepts, (2) certain methods of organizing human activity, and (3) mental processes — without integrating such abstract idea into a “practical application,” i.e., without “apply[ing], rely[ing] on, or us[ing] the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Id.* at 52–55. The considerations articulated in MANUAL OF PATENT EXAMINING PROCEDURE § 2106.05(a)–(c) and (e)–(h) (“MPEP”) bear upon whether a claim element (or combination of elements) integrates an abstract idea into a practical application. *Id.* at 55. A claim that is “directed to” an abstract idea constitutes ineligible subject matter, unless the claim recites an additional element (or combination of elements) amounting to significantly more than the abstract idea. *Id.* at 56.

Although created “[i]n accordance with judicial precedent” (*id.* at 52), the *2019 Revised Guidance* enumerates the analytical steps differently than the Supreme Court’s *Alice* opinion. Step 1 of the *2019 Revised Guidance* addresses whether the claimed subject matter falls within any of the statutory categories of § 101. *Id.* at 53–54. Step 2A, Prong One, concerns whether the claim at issue recites ineligible subject matter and, if an abstract idea is recited, Step 2A, Prong 2, addresses whether the recited abstract idea is

integrated into a practical application. *Id.* at 54–55. Unless such integration exists, the analysis proceeds to Step 2B, in order to determine whether any additional element (or combination of elements) amounts to significantly more than the identified abstract idea. *Id.* at 56.

In the present Appeal, neither the Examiner nor the Appellants question the satisfaction of Step 1 of the *2019 Revised Guidance* — i.e., that the claims are drawn to subject matter within the scope of § 101.

In relation to Step 2A, Prong One, of the *2019 Revised Guidance*, we note that the Examiner states that independent claims 1, 6, 22, and 26 recite an “abstract idea” — specifically, the concept of “adjusting the learning curriculum based on the learner’s performance,” which the Examiner regards as a “method of organizing human activities.” Final Action 2. The Examiner states that the claimed subject matter could also be regarded as an ineligible abstract idea — as an “idea of itself” or as a “mental process.” Answer 7. The Appellants dispute the Examiner’s determination — contending that it lacks the support of case law authority and, in any event, oversimplifies the claim language. Appeal Br. 12–18.

In analyzing Step 2A, Prong One, we look to the language of claim 1, noting that it recites: “evaluating, by a computing system, a performance of a plurality of learners taking at least one lesson of a plurality of lessons in a learning curriculum”; “forming, by the computing system, an expectation of a subsequent learner’s performance in taking a subsequent lesson”; “evaluating, by the computing system, an actual performance for the subsequent learner in taking the subsequent lesson”; and “removing from the learning curriculum, by the computing system, the at least one lesson in response to determining that the adjusted Effectiveness Factor is below a

threshold.” Notwithstanding the implementation of these steps by a “computer system” and the designation of the comparison metric as an “Effectiveness Factor,” the foregoing steps describe a process of assessing student performance in a lesson, assessing expected performance in subsequent lessons, and modifying subsequent lessons, based upon the expected performance. These steps fit within the *2019 Revised Guidance*’s category of “managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions)” — specifically, the operation of “teaching” — in the grouping of “[c]ertain methods of organizing human activity,” which is a type of “abstract idea.” *2019 Revised Guidance*, 84 Fed. Reg. at 52. Features similar to those identified in claim 1 are present in the other independent claims 6, 22, and 26. Accordingly, each of the claims in the Appeal recites an abstract idea, under Step 2A, Prong One.

This determination is not altered by the Appellants’ assertion that the claimed subject matter “cannot be said to preempt a fundamental, abstract concept,” because “one can readily adjust a learning curriculum based on a learner’s performance without performing the claimed operations.” Appeal Br. 15. “While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). *See Answer 10.*

With regard to Step 2A, Prong Two, of the *2019 Revised Guidance*, unless a claim, reciting a judicial exception (such as an abstract idea), “integrates the recited judicial exception into a practical application of that

exception,” the claim is “directed to” the judicial exception. *2019 Revised Guidance*, 84 Fed. Reg. at 53.

Notably, the Examiner states that, “[e]ven though the claims in the instant application are tied to computer technology, . . . the use of the computing system is use[d] . . . merely as a tool and for convenience purposes,” such that the claims are not patent-eligible. Answer 7. The *2019 Revised Guidance*, 84 Fed. Reg. at 55 explains that such a condition indicates a lack of integration into a practical application, under Step 2A, Prong Two. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016) (“[T]he first step in the *Alice* inquiry in this case asks whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.”)

The Appellants do not present any contrary argument — i.e., to the effect the claims might integrate the identified judicially excepted subject matter into a practical application, such as the factors addressed at MPEP § 2106.05(a)–(c) and (e)–(h). Accordingly, considering both prongs of Step 2A, we are not persuaded of error in the Examiner’s determination that the claims are directed to an abstract idea.

Turning to Step 2B of the *2019 Revised Guidance*, we note that the Appellants contend that the independent claims, notwithstanding textual differences among them, employ what the Appellants characterize as “intermediate steps” (e.g., forming an expectation of a subsequent learner’s performance in taking a lesson, selectively adjusting the Effectiveness Factor based on a performance heuristic, and comparing a group

performance of a first portion of a plurality of learners on a third lesson to a group performance of a second portion of the plurality of learners on the third lesson) that allegedly amount to “significantly more” than the identified abstract idea of “adjusting a learning curriculum based on a learner’s performance.” Appeal Br. 20–21.

Yet, contrary to the admonition of the *2019 Revised Guidance*, to the effect that Step 2B inquires whether a claim “recite[s] additional elements that render the claim patent eligible even though a judicial exception is recited in a separate claim element” (84 Fed. Reg. at 56), the Appellants rely upon claim elements that are part of the identified abstract idea, as addressed above — i.e., claim 1’s limitations of “forming . . . an expectation of a subsequent learner’s performance in taking a subsequent lesson” and “evaluating . . . an actual performance for the subsequent learner in taking the subsequent lesson.” Accordingly, the Appellants do not rely upon “additional elements” in attempting to establish significantly more than the identified abstract idea. “It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018).

Furthermore, insofar as the Appellants argue that the calculation of an “Effectiveness Factor” might amount to “significantly more” (*see* Appeal Br. 21), no explanation is offered as to why this might be the case. The Appellants do not point to anything particularly meaningful about the “Effectiveness Factor” — which simply provides a basis for comparing one student to another (i.e., a grade) — that could constitute a basis for

Appeal 2017-009183
Application 12/165,648

amounting to significantly more than an abstract idea, as identified above.

Consequently, the Appellants' argument does not persuade us of error in the rejection, as to Step 2B.

Accordingly, in view of the foregoing analysis, we sustain the Examiner's rejection of claims 1–3, 5–10, 22–26, 28, 29, 31–34, and 36 under 35 U.S.C. § 101.

DECISION

We AFFIRM the Examiner's decision rejecting claims 1–3, 5–10, 22–26, 28, 29, 31–34, and 36 under 35 U.S.C. § 101.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED